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EVALUACIÓN DE LA INFLUENCIA DE LOS
MEGAEVENTOS DEPORTIVOS EN LOS
ECOSISTEMAS EMPRENDEDORES DE
LOS PAÍSES ANFITRIONES

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DOCTORAL DISSERTATION

ASSESSING THE INFLUENCE OF MEGA
SPORTING EVENTS ON THE
ENTREPRENEURIAL ECOSYSTEMS OF
HOST NATIONS

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RESUMEN

Esta tesis investiga la influencia multifacética de los megaeventos deportivos (MSE por sus siglas en inglés) en los ecosistemas emprendedores (EE por sus siglas en inglés) de los países anfitriones, un tema de creciente interés académico en la intersección entre el emprendimiento y la gestión de eventos deportivos. Evalúa cuatro hipótesis: (H1) que los MSE ejercen un impacto positivo en los EE; (H2) que este impacto es más fuerte cuanto más populares son; (H3) que el impacto es mayor en los países económicamente desarrollados; y (H4) que el efecto es más pronunciado en los países con un estado de derecho más sólido.

Al objeto de comprobar estas hipótesis, el estudio emplea un modelo de regresión dinámica de diferencias en diferencias (DID por sus siglas en inglés) que abarca múltiples eventos deportivos y países anfitriones desde 2009 hasta 2018. Se aplica el emparejamiento exacto aproximado (CEM por sus siglas en inglés) para preprocesar el conjunto de datos, lo que garantiza la comparabilidad entre grupos y fortalece la validez de la inferencia causal. Este método refuerza la validez del modelo DID al permitir una estimación más precisa de los efectos causales de los MSE.

Los resultados indican que la celebración de MSE se asocia con mejoras en la calidad de los EE en los países anfitriones. Adicionalmente, el estudio demuestra que dichas asociaciones son más fuertes en el caso de los eventos más populares, los países con mayor desarrollo económico y aquellos con un estado de derecho más sólido.

Esta tesis proporciona pruebas empíricas que respaldan los efectos positivos de los MSE y ofrece información útil para que los responsables de las políticas públicas y los organizadores los aprovechen estratégicamente. La investigación revela una relación dinámica entre los MSE y los EE que enriquece el debate teórico y hace aportaciones prácticas para fomentar ecosistemas emprendedores sostenibles en el contexto de eventos deportivos de gran escala.

Palabras clave: Megaevento deportivo, ecosistema emprendedor, evaluación de impacto, legado, implicaciones políticas

ABSTRACT

This thesis investigates the multifaceted influence of mega sporting events (MSEs) on entrepreneurial ecosystems (EEs) in host countries, a topic of growing scholarly interest at the intersection of entrepreneurship and sports event management. It evaluates four hypotheses: (H1) that MSEs positively impact EEs; (H2) that this impact is stronger for more popular; (H3) that the impact is greater in economically developed countries; and (H4) that the effect is more pronounced in countries with higher rule of law.

To test these hypotheses, the study employs a dynamic difference-in-differences (DID) regression model covering multiple sport events and host countries from 2009 to 2018. Coarsened Exact Matching (CEM) is applied to pre-process the dataset, ensuring balanced comparison groups and enhancing the robustness of causal inference. This method enhances the validity of the DID model by allowing for a more precise estimation of the causal effects of MSEs.

Findings indicate that hosting MSEs is associated with improvements in the quality of EEs in host nations. Furthermore, the study also demonstrates that the associations are stronger for more popular events, more economically developed countries, and those with higher rule of law.

This thesis provides empirical evidence supporting the positive effects of MSEs, offering insights for policymakers and event organisers to strategically leverage these events. The research reveals a dynamic relationship between MSEs and EEs, enriching theoretical discourse and providing practical implications for fostering sustainable entrepreneurial ecosystems in the context of large-scale sporting events.

Keywords: Mega Sporting Event, Entrepreneurial Ecosystem, Impact Assessment, Legacy, Policy Implications

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1. INTRODUCCION

1.1. Antecedentes

Un ecosistema emprendedor (EE) es una red de elementos interconectados que apoyan el crecimiento de nuevas empresas en el marco de un territorio específico. Se trata de una comunidad regional de elementos sociales, políticos, económicos y culturales que fomenta el flujo de talento, información y recursos para apoyar a las empresas emergentes innovadoras (Isenberg, 2010; Spigel, 2017; Shwetzzer, Maritz y Nguyen, 2019; Cao y Shi, 2020, entre otros). Para que un EE sea exitoso se requiere la interacción sistémica entre las partes interesadas —incluyendo emprendedores, inversores, gobiernos e instituciones educativas— (Stam, 2015), así como una asignación eficiente de recursos, que incluye capital financiero (préstamos, subvenciones), capital humano (talento, mentores), recursos tecnológicos (infraestructuras, laboratorios) y capital social (redes, conexiones) (Stam y Spigel, 2016; Cavallo et al., 2019). Contar con un EE robusto es fundamental para un país, ya que proporciona un entorno propicio en el que las empresas emergentes tienen acceso a recursos y apoyo de forma que se estimula el crecimiento económico, la creación de empleo y la innovación en la comunidad local (Van de Ven, 1993; Kansheba y Wald, 2020).

Los megaeventos deportivos (MSE) se encuentran entre los factores que pueden tener un impacto significativo en el EE del país anfitrión. Los MSE son eventos internacionales de corta duración con consecuencias a largo plazo (Roche, 1994) que atraen a grandes multitudes y la atención de los medios (Jago y Shaw, 1998; Roche, 2000; Horne, 2007). En lo que respecta al EE, los MSE pueden fomentar la actividad emprendedora al apoyar a las empresas locales, atraer inversores y clientes, e impulsar el desarrollo de nuevas infraestructuras (Spilling, 1996; Hall, 2006; Sterken, 2006). Sin embargo, los MSE requieren importantes inversiones financieras que abarcan el desarrollo de infraestructuras, la seguridad, el marketing y los gastos operativos. En las últimas tres décadas, el presupuesto medio para la organización de MSE ha pasado de 3.400 millones de dólares en 1990 a 35.700 millones en 2022.

El MSE más reciente, la Copa Mundial de la FIFA 2022 en Catar, contó con un presupuesto de inversión estimado entre 200.000 y 300.000 millones de dólares, lo que propició un amplio desarrollo urbano y al establecimiento de infraestructuras esenciales, tales como hoteles, estadios, sistemas de metro, puertos marítimos y aeropuertos (Bibolov et al., 2024). Además, los países anfitriones suelen percibir los MSE como fuente de orgullo nacional y como estrategia de desarrollo económico. Muchos países aspiran a acoger un MSE debido a los beneficios que puede comportar para su EE. Por ejemplo, los MSE atraen turistas y deportistas, elevan la demanda de nuevos bienes y servicios e incitan a los emprendedores a idear soluciones innovadoras. También proporcionan una plataforma para conectar con inversores, socios potenciales y mentores, lo que favorece las oportunidades de colaboración. Algunos estudios han investigado los beneficios de los MSE en términos de desarrollo económico nacional. Entre los ejemplos más destacados de MSE figuran los Juegos Olímpicos y la Copa Mundial de la FIFA, al concitar una atención y una participación verdaderamente globales. Estos eventos pueden incidir de manera significativa tanto en las áreas urbanas (Hiller, 2000b) como en las economías (Gold y Gold, 2011), lo que potencia la notoriedad turística, el atractivo y la rentabilidad de las ciudades anfitrionas (Ritchie y Yangzhou, 1987; Yangzhou, 1987; Ritchie, 1984). Los MSE también contribuyen al desarrollo de infraestructuras, la visibilidad internacional y el impulso cultural (Ritchie y Yangzhou, 1987; Yangzhou, 1987; Ritchie, 1984). En última instancia, los MSE pueden constituir un motor de dinamización económica al reforzar la imagen del país anfitrión, atraer inversión y negocios internacionales, y estimular tanto la actividad comercial como el turismo (Matheson, 2006; Chen, Qu y Spaans, 2013; Perić, 2018). Si bien parte de la literatura incide en los réditos económicos y la mejora de infraestructuras, otros estudios cuestionan la persistencia de los beneficios y señalan efectos desiguales. El contraste entre estos hallazgos pone de relieve una laguna: hay un déficit en el estudio de la relación precisa entre los MSE y el EE del país anfitrión. A fin de colmar esta laguna, la presente investigación examina de qué manera la celebración de un MSE influye en la calidad del EE de un país.

La bibliografía existente sobre los MSE destaca principalmente sus impactos en el crecimiento económico, el turismo y el desarrollo de infraestructuras (Matheson, 2006; Perić, 2018), pero sigue sin estar clara su influencia sostenida en los EE. Este estudio aborda directamente dicha laguna al explorar sistemáticamente en qué medida acoger MSE influye en los EE de los países anfitriones. Por tanto, la principal pregunta de investigación es en qué medida los MSE influyen en el desarrollo del EE en los países anfitriones y qué factores contextuales de los países anfitriones (frente a los países candidatos) configuran esta relación. La muestra de países anfitriones utilizada en el estudio incluye Rusia, Corea del Sur, Brasil, Indonesia y Francia, que acogieron la Copa Mundial de la FIFA 2018, los Juegos Olímpicos de Invierno de 2018, los Juegos Olímpicos de Verano de 2016, los Juegos Asiáticos de 2018 y la Eurocopa de 2016, respectivamente. Los países anfitriones constituyen el grupo de tratamiento, mientras que el grupo de control incluye países licitadores: Bélgica, Países Bajos, Reino Unido, Portugal, España, Alemania, Azerbaiyán, Estados Unidos, Catar, República Checa, Japón, Vietnam, Italia y Turquía.

Basándose en el análisis previo del legado de los MSE y en la laguna identificada en torno a su conexión con los EE, este estudio investiga los diversos mecanismos a través de los cuales los MSE pueden ejercer influencia sobre los EE. En primer lugar, la contratación y la actualización de proveedores asociadas a la organización del evento pueden exponer a las empresas locales a nuevas normas y redes (Spilling, 1996; Hall, 2006; Sterken, 2006). En segundo lugar, la exposición mediática y los efectos de señalización derivados de las audiencias globales pueden reforzar la visibilidad del país anfitrión y atraer flujos de recursos externos relevantes para el emprendimiento (Ritchie, 1984; Ritchie y Yangzhou, 1987; Horne, 2007; Müller, 2015). En tercer lugar, la prioridad y coordinación de las políticas necesarias para cumplir plazos estrictos pueden catalizar la colaboración interinstitucional y el apoyo complementario al emprendimiento (Isenberg, 2010; Stam, 2015; Stam y Van de Ven, 2021). Por último, las complementariedades de infraestructuras —transporte, activos digitales y equipamientos— pueden reducir costes y ampliar el acceso al mercado para las empresas nuevas y en crecimiento (Gold y Gold, 2011; Maennig y Zimbalist, 2012). Estos

mecanismos sirven de base para interpretar el momento y la variabilidad de los efectos observados en los resultados empíricos que se presentan posteriormente en la tesis.

Este estudio propone cuatro hipótesis para abordar de forma exhaustiva la pregunta de investigación. En primer lugar, sostiene que el impacto de los MSE en el EE es mayor en los países anfitriones que en los candidatos tras la adjudicación. En segundo lugar, postula que el impacto depende de la popularidad del evento, de modo que los MSE más populares ejercen una influencia mayor. En tercer lugar, plantea que el impacto es más pronunciado en los países anfitriones desarrollados que en los menos desarrollados. Por último, el impacto de los MSE sobre los EE es más pronunciado en los países anfitriones donde el estado de derecho es más sólido, en contraste con aquellos que presentan marcos institucionales más frágiles. Para comprobar estas hipótesis, la investigación utiliza un modelo de regresión dinámica de diferencias en diferencias, en el que el GEI actúa como variable dependiente y el tiempo (por año) como una de las variables independientes principales, junto con las covariables y los términos de interacción pertinentes. Para evitar ambigüedades en cuanto al constructo empírico del “impacto en el EE”, la unidad de análisis es el país-año y el resultado principal es el GEI general y, cuando procede, sus subíndices y pilares, tal como se definen en el capítulo 2 (Ács, Szerb y Autio, 2017; Ács, Szerb y Lloyd, 2018).

Dado el potencial beneficio de los MSE para el EE del país anfitrión, la investigación basada en evidencias sobre su impacto antes y después de la adjudicación es fundamental para determinar los efectos multifacéticos de acoger MSE, lo que permite tomar decisiones informadas y garantizar la transparencia en la planificación y ejecución. Este estudio amplía la literatura existente al demostrar empíricamente que la celebración de MSE contribuye de manera significativa a mejorar los EE, con lo que se responde a la escasa evidencia empírica identificada en trabajos previos (Hayduk, 2019). Con ello, el estudio realiza tres aportaciones principales. En primer lugar, amplía la investigación existente al demostrar empíricamente que la celebración de un MSE puede traducirse en mejoras cuantificables en el EE de un país, lo cual colma una laguna en la literatura sobre el legado de los eventos. En segundo lugar, desvela cómo los factores contextuales (escala del evento e instituciones anfitrionas) moderan este impacto, de tal forma que se cuestiona el supuesto de que todos los

megaeventos producen beneficios equiparables. En tercer lugar, introduce un enfoque de métodos mixtos (que combina diferencias en diferencias con evidencia cualitativa), lo que ofrece una comprensión más matizada del cómo y el por qué de estos impactos. En conjunto, estas aportaciones amplían el debate teórico sobre los legados de los MSE y ofrecen a los responsables políticos información probada para utilizar estos eventos en beneficio del desarrollo emprendedor.

1.2. Lagunas en la investigación

Los estudios que examinan la relación entre MSE y EE han aumentado de forma notable (Hayduk, 2019; Chen, Qu y Spaans, 2013; Perić, 2018) y, en los últimos diez años, la investigación sobre EE ha ganado impulso en la comprensión de las complejas interacciones derivadas de las relaciones empresariales. De este modo, el interés académico por el emprendimiento a escala nacional se ha extendido más allá del ámbito limitado de la creación de nuevas empresas (Wolfe y Shepherd, 2015). En la actualidad, incorpora una perspectiva ecosistémica de los procesos de identificación, desarrollo y aprovechamiento de oportunidades, lo que pone de relieve el papel de los EE en la promoción, sostenimiento y expansión de la actividad emprendedora a escala nacional.

Sin embargo, aunque los países anfitriones suelen reconocer el potencial de los MSE para impulsar el emprendimiento, existe una laguna entre este reconocimiento y su estudio riguroso. La literatura previa sugiere que las ciudades anfitrionas pueden emplear los MSE como instrumentos para promover sus ecosistemas emprendedores locales (Spilling, 1996; Hall, 2006; Sterken, 2006; Matheson, 2006; Chen, Qu y Spaans, 2013; Perić, 2018). No obstante, los libros de candidatura más recientes no han identificado explícitamente esta dimensión como una prioridad estratégica. Pese a que los MSE generan oportunidades para el desarrollo del emprendimiento, la mayoría de las candidaturas no han articulado su papel de anfitrionas con programas de promoción emprendedora ni con objetivos empresariales estratégicos. La revisión de la literatura identifica lagunas importantes en la comprensión del

impacto de los MSE en los EE y, en general, una intersección poco explorada entre ambos campos.

En conjunto, estas lagunas evidencian la necesidad de generar pruebas comparativas que permitan distinguir los efectos propios de los países anfitriones de las tendencias paralelas observadas entre los candidatos no seleccionados, así como analizar el momento en torno a la decisión de adjudicación. En consecuencia, el estudio adopta un diseño de emparejamiento combinado con diferencias en diferencias (*matching-plus-DID*) para comparar los años correspondientes a países anfitriones y candidatos alrededor del año de adjudicación, empleando el GEI (y determinados subpilares) como variables dependientes, y analizando la heterogeneidad teóricamente motivada por la popularidad del evento, el nivel de desarrollo económico y el estado de derecho (Gratton y Preuss, 2008; Isenberg, 2010; Stam, 2015; Autio et al., 2018).

En primer lugar, los estudios centrados en MSE y EE no examinan la naturaleza y magnitud de la relación entre ambos constructos. En segundo lugar, si bien los EE emergen como fenómeno global creciente (Bruton et al., 2008), su teoría y conceptos siguen fragmentados (Cao y Shi, 2021). En tercer lugar, la investigación existente mide sobre todo los impactos económicos y sociales de los MSE —como turismo e infraestructuras—, pero apenas analiza cómo estos eventos influyen en los EE locales. Más concretamente, los estudios sobre MSE suelen basarse en métricas económicas tradicionales (p. ej., crecimiento del PIB o creación de empleo) sin tener en cuenta su impacto en startups, innovación y dinámica de los EE. La evidencia sobre tales efectos es, por tanto, escasa. Además, existe una limitada transferencia de conocimiento sobre el propio proceso de preparación del evento, crucial para los resultados emprendedores en los países anfitriones (Ratten, 2020; Scott et al., 2022; Gleason, 2023).

Asimismo, al examinar los EE, la literatura se centra en regiones anfitrionas desarrolladas, tales como Norteamérica y Europa (Cao y Shi, 2021). El contexto de países en desarrollo está, por ende, infrarrepresentado (Lingelbach et al., 2005), de ahí la importancia de realizar evaluaciones comparativas entre países en desarrollo y desarrollados. Además, los pocos

estudios existentes tienden a centrarse en grandes empresas como actores principales del EE (p. ej., hostelería y transporte), mientras que pasan por alto a los emprendedores locales (Sterken, 2006). Por último, las investigaciones actuales se concentran en eventos de gran repercusión, como los Juegos Olímpicos o la Copa del Mundo, lo que deja relativamente inexplorados los MSE de menor escala o regionales (Juegos Asiáticos, Eurocopa, etc.) y su impacto en el tejido emprendedor local.

1.3. Preguntas de investigación e hipótesis

Esta tesis investiga la relación entre EE y MSE, con la pregunta de investigación de hasta qué punto los MSE influyen en el desarrollo del EE en los países anfitriones y qué factores contextuales de los países anfitriones (frente a los candidatos) configuran esta relación. A lo largo de la tesis, el año de adjudicación (t) denota el año natural en el que se conceden oficialmente los derechos de organización; los años previos al tratamiento se denotan ($t-k$) y los posteriores ($t+k$). Para abordar la pregunta de investigación, se proponen cuatro hipótesis:

Hipótesis 1: El impacto de los MSE en el EE es mayor en los países anfitriones que en los candidatos después de la adjudicación.

Motivada por la H1, la teoría del capital social sugiere que el alcance de las redes y la calidad institucional condicionan la difusión y productividad de los recursos movilizados por los MSE, lo que afecta a los resultados del EE. En este contexto, sobresalen tres factores moderadores: la popularidad del evento (que amplía la atención, el gasto y la búsqueda de socios), el desarrollo económico del país anfitrión (que refuerza la capacidad de absorción y los activos complementarios) y el estado de derecho (que garantiza la fiabilidad contractual y la confianza de la inversión) (Machalek y Martin, 2015; Gratton et al., 2000; Kim et al., 2006; Ritchie, 1984; Müller, 2015; Cornelissen, 2008; Maennig y Zimbalist, 2012; Hartog, Stel y Storey, 2010; Elert, Henrekson y Sanders, 2019; Salinas, Ortiz y Muffatto, 2019).

Los MSE pueden conceptualizarse como una entrada de capital en forma de inversión extranjera directa (IED) (Russo y Figueira, 2021; Lertwachhara, Tongurai y Boonchoo, 2021; Drapkin y Lupkyanov, 2020), dado que su organización conlleva desarrollo físico e infraestructuras, así como empleo en múltiples sectores (turismo, comercio minorista y servicios). Numerosos estudios han examinado los factores que inciden en la inversión extranjera directa (IED); entre los más relevantes figuran el tamaño económico del país receptor y la regulación nacional sobre protección de inversiones. Asimismo, se reconoce que una mayor IED produce un efecto multiplicador más amplio que una menor. Sobre esta base, además de analizar la primera hipótesis, este estudio investiga tres hipótesis adicionales. Junto con la H1, se proponen tres relaciones moderadoras: la H2 plantea que los MSE más populares ejercen una influencia más intensa en los EE; la H3 sostiene que acoger un MSE en un país más desarrollado económicamente genera un mayor impacto en su EE; y la H4 postula que acoger un MSE en un país con un estado de derecho más sólido produce un impacto más significativo en el EE.

Hipótesis 2: El impacto de los MSE en el EE depende de la popularidad del evento, de modo que los MSE más populares ejercen una mayor influencia.

Hipótesis 3: El impacto de los MSE en el EE es más pronunciado en los países anfitriones desarrollados que en los menos desarrollados.

Hipótesis 4: El impacto de los MSE en el EE es mayor en los países anfitriones con un estado de derecho más sólido que en aquellos con marcos institucionales más débiles.

1.4. Metodología

Esta tesis emplea un enfoque de métodos mixtos para investigar el impacto de los MSE en el EE en los países anfitriones, entre ellos Rusia (Copa Mundial de la FIFA 2018), Corea (Juegos Olímpicos de Invierno 2018), Brasil (Juegos Olímpicos de Verano 2016), Indonesia (Juegos Asiáticos 2018) y Francia (Eurocopa 2016). Estos eventos se seleccionaron porque

cumplen los criterios de Müller para MSE y, crucialmente, ofrecen series de datos completas y comparables que abarcan el período anterior y posterior a la adjudicación. En consecuencia, los países adjudicatarios incluidos en el análisis son Rusia, Corea, Brasil, Indonesia y Francia. Asimismo, los países candidatos considerados incluyen Bélgica, Países Bajos, Reino Unido, Portugal, España, Alemania, Azerbaiyán, Estados Unidos, Catar, República Checa, Brasil, Japón, Indonesia, Vietnam, Francia, Italia y Turquía. El análisis cuantitativo emplea un modelo de regresión DID para evaluar el impacto de los MSE a lo largo del tiempo, con un control de los factores externos. El estudio compara asimismo el desempeño de los países anfitriones en función del Índice Global de Emprendimiento (GEI) antes y después de la adjudicación. Antes de aplicar el análisis de diferencias en diferencias (DID), se llevó a cabo un emparejamiento exacto aproximado (CEM) con el fin de preprocesar el conjunto de datos y obtener una muestra robusta con un bajo nivel de desequilibrio.

Con el fin de complementar y enriquecer los hallazgos cuantitativos, el estudio adopta un enfoque cualitativo. Se llevó a cabo un análisis de contenido de diversas fuentes, como los libros de candidatura, los informes oficiales, la cobertura mediática y la literatura académica. Además, se realizaron entrevistas semiestructuradas con expertos en la materia, entre ellos responsables políticos implicados en la planificación y ejecución de los MSE, con el objetivo de confirmar, ampliar o reforzar los resultados del análisis cuantitativo mediante la perspectiva práctica de quienes participan en la formulación de políticas. También se realizaron análisis específicos por evento en determinados países anfitriones para examinar los desafíos, estrategias y resultados vinculados a la organización de MSE y sus efectos en el EE.

1.5. Contribuciones esperadas y estructura de la tesis

El presente estudio realiza varias contribuciones. En primer lugar, la investigación sobre el impacto de los MSE en los EE se apoya en el marco dinámico de los EE propuesto por Stam (2015) y Ács, Autio y Szerb (2014), que destaca la importancia del EE y del sistema emprendedor nacional para el crecimiento de los emprendedores. En consecuencia, este estudio amplía el trabajo de Stam (2015) para investigar si los MSE influyen de forma

significativa en los EE, afectando la calidad de los emprendedores. En segundo lugar, los resultados proporcionan un marco teórico sólido al demostrar el papel específico de los MSE en la dinamización del EE del país anfitrión, en línea con las teorías del impacto económico de los MSE propuestas por Baade y Matheson (2004). Por ejemplo, la investigación previa sobre los impactos de los MSE se ha centrado principalmente en resultados como el crecimiento económico y el desarrollo de infraestructuras, sin prestar suficiente atención al emprendimiento. Al subrayar el papel de los MSE en la dinamización del EE de los países anfitriones, esta investigación amplía los marcos teóricos existentes y demuestra que los MSE deben incluirse entre los factores que impulsan el desarrollo emprendedor, de forma que se hace una contribución innovadora a la literatura.

Además del componente teórico, este estudio ofrece contribuciones prácticas. En primer lugar, los hallazgos aportan evidencia empírica para la organización de MSE y la evaluación de su impacto. Al subrayar estrategias específicas de MSE para participar en licitaciones, y basándose en Gratton y Preuss (2008), los resultados contribuyen a la necesidad —ya señalada por estos autores— de estudios que aborden específicamente la asociación entre MSE y EE. En segundo lugar, el estudio se apoya en el enfoque multiactoral de desarrollo del EE defendido por Isenberg (2010), al destacar la importancia de la colaboración entre sectores público, privado y sociedad civil para maximizar los beneficios emprendedores de los MSE.

En consonancia con la estrategia de identificación, el estudio aporta evidencia de que acoger MSE se asocia con mejoras en la calidad del EE bajo condiciones contextuales específicas. Frente a estudios de legado centrados en PIB o turismo, esta tesis examina la calidad del EE nacional (GEI) con una lógica de identificación y explica la heterogeneidad a través de moderadores institucionales y mecanismos cualitativos (libros de candidatura, entrevistas) (Gratton y Preuss, 2008; Isenberg, 2010; Stam, 2015; Stam y Van de Ven, 2021).

La tesis se estructura como sigue. La revisión bibliográfica analiza críticamente el estado actual de la investigación sobre los EE y los MSE, identifica las lagunas existentes y establece las bases para la presente investigación, al tiempo que ofrece el contexto necesario para el

estudio. El capítulo de metodología describe el enfoque mixto adoptado, que combina métodos cuantitativos y cualitativos para contrastar las hipótesis propuestas y responder a las preguntas de investigación. El capítulo de resultados y análisis de datos presenta los hallazgos mediante modelos de regresión DID y gráficos de coeficientes pertinentes. Asimismo, este capítulo incluye los resultados cualitativos derivados de los informes GEM, los libros de candidatura y las entrevistas semiestructuradas. La tesis finaliza con un capítulo de síntesis y conclusiones, en el que se analizan las limitaciones del estudio y se proponen futuras líneas de investigación.

2. INTRODUCTION

2.1. Background

An entrepreneurial ecosystem (EE) is a network of interconnected elements that support the growth of new businesses within a specific territory. It is a regional community of social, political, economic, and cultural elements that encourages the flow of talent, information, and resources to support innovative start-ups (Isenberg, 2010; Spigel, 2017; Shwetzler, Maritz, & Nguyen, 2019; Cao & Shi, 2020, among others). Successful EEs require systemic interactions between stakeholders, including entrepreneurs, investors, governments, and educational institutions (Stam, 2015), as well as efficient resource allocation, which includes financial capital (loans, grants), human capital (talent, mentors), technological resources (infrastructure, labs), and social capital (networks, connections) (Stam & Spigel, 2016; Cavallo et al., 2019). Having a strong EE is crucial for a country since it can provide a thriving environment where startups have easy access to resources and support, thus stimulating economic growth, creating jobs, and fostering innovation in the local community (Van de Ven, 1993; Kansheba & Wald, 2020).

Mega sporting events (MSE) are among the factors that can potentially have a significant impact on a host country's EE. MSEs are short-term international events that have long-term consequences (Roche, 1994), attracting large crowds and media attention (Jago & Shaw, 1998; Roche, 2000; Horne, 2007). In relation to the entrepreneurial ecosystem, MSEs promote entrepreneurial activity by supporting local businesses, attracting investors and customers, as well as spearheading the development of new infrastructure (Spilling, 1996; Hall, 2006; Sterken, 2006). However, MSEs require substantial financial investments, including infrastructure development, security, marketing, and operational expenses. Over the past three decades, the average budget for organizing MSEs has surged from \$3.4 billion in 1990 to \$35.7 billion in 2022.

The most recent MSE, the 2022 FIFA World Cup in Qatar, commanded an investment budget of \$200-300 billion, resulting in extensive urban development and the establishment of essential infrastructure such as hotels, stadiums, metro systems, seaports, and airports (Bibolov et al., 2024). Additionally, host countries often perceive MSEs as a source of national pride and as an economic development strategy. Many countries aspire to host an MSE due to the potential benefits it can bring to the host country's entrepreneurial environment. For instance, MSEs attract both tourists and athletes, spurring demand for new goods and services and inspiring entrepreneurs to devise innovative solutions. MSEs also provide a platform for entrepreneurs to connect with investors, potential partners, and mentors, fostering collaborative opportunities. Some studies have investigated the benefits of MSEs in the economic development of a nation. Key examples of MSEs include the Olympic Games and FIFA World Cup, which attract global attention and participation. These events can significantly impact both urban areas (Hiller, 2000b) and economies (Gold & Gold, 2011), increasing tourism awareness, appeal, and profitability in host cities (Ritchie & Yangzhou, 1987; Yangzhou, 1987; Ritchie, 1984). MSEs also contribute to infrastructure development, international visibility, and cultural growth in host countries (Ritchie & Yangzhou, 1987; Yangzhou, 1987; Ritchie, 1984). Ultimately, MSEs can significantly boost economies by rebranding the host nation's image, attracting international businesses, and increasing commercial activities including tourism (Matheson, 2006; Chen, Qu, & Spaans, 2013; Perić, 2018). While some studies emphasize economic gains and infrastructural improvement, others question the long-term benefits and highlight uneven benefits. For example, certain analyses highlight short-term boosts in business activity, whereas others find no sustained entrepreneurial growth or even uneven outcomes. This inconsistency in findings underscores a critical gap: the precise relationship between MSEs and the host country's EE remains under-examined. Addressing this gap, the present research explores how hosting an MSE influences the quality of a nation's EE.

Extant literature on MSEs primarily highlights their impacts on economic growth, tourism, and infrastructure development (Matheson, 2006; Perić, 2018) yet remains unclear on their sustained influence on EEs. This study directly addresses this gap by systematically exploring the extent to which hosting MSEs influences the EE of host countries. Therefore, this study's main research question is to what extent do MSEs influence the development of EE in host countries, and what are the contextual factors of host countries (versus bidding countries) that shape this relationship. The sample of hosting countries utilized in the study are Russia, South Korea, Brazil, Indonesia, and France, which hosted the 2018 FIFA World Cup, 2018 Winter Olympics, 2016 Summer Olympics, 2018 Asian Games, and 2016 Euro Cup respectively. Hosting countries are treated as the treatment group, while the control group includes bidding countries consisting of Belgium, Netherlands, United Kingdom, Portugal, Spain, Germany, Azerbaijan, the United States, Qatar, Spain, Czech, Japan, Vietnam, Italy, and Turkey.

Building on the preceding discussion of MSE legacies and the identified gap linking them to EEs, this study considers several channels through which MSEs may influence the EEs. First, procurement and supplier upgrading associated with event delivery can expose local firms to new standards and networks (Spilling, 1996; Hall, 2006; Sterken, 2006). Second, attention and signalling effects derived from global audiences can increase place visibility and attract external resource flows relevant to entrepreneurship (Ritchie, 1984; Ritchie & Yangzhou, 1987; Horne, 2007; Müller, 2015). Third, policy salience and coordination required for time-bound delivery can catalyse inter-agency collaboration and complementary entrepreneurship support (Isenberg, 2010; Stam, 2015; Stam & Van de Ven, 2021). Finally, infrastructure complementarities—transport, digital, and venue assets—can lower costs and expand market access for new and growing firms (Gold & Gold, 2011; Maennig & Zimbalist, 2012). These mechanisms provide the basis for interpreting the timing and heterogeneity of effects in the empirical results reported later in the thesis.

To comprehensively address the research question, this study proposes four hypotheses. First, it argues that the impact of MSEs on EE is greater in hosting countries than in bidding countries after the award date. Second, it posits that the impact of MSEs on EE is contingent on the popularity of MSEs, with more popular MSEs exerting a stronger influence. Third, it suggests that the impact of MSEs on EE is more pronounced in developed hosting countries compared to less developed ones. Finally, the impact of MSEs on EE is greater in hosting countries with a stronger rule of law compared to those with weaker institutional frameworks. To test these hypotheses, this research employs a dynamic difference in difference regression approach, using the GEI as the dependent variable and time (by year) as a key independent variables, along with relevant covariates and interaction terms. To avoid ambiguity regarding the empirical construct of “EE impact”, the unit of analysis is the country-year and the primary outcome is the GEI-overall and, where relevant, its sub-indices and pillars as defined in Chapter 2 (Ács, Szerb, & Autio, 2017; Ács, Szerb, & Lloyd, 2018).

Given the potential benefits that MSEs can provide for the entrepreneurial ecosystem of the host country, evidence-based research on the impact of MSEs pre-and post is considered critical and required for determining the multifaceted impacts of hosting MSEs, allowing for informed decision-making and transparency in planning and execution. This study enriches existing literature by empirically demonstrating that hosting MSEs significantly improves EEs, thus addressing the limited empirical evidence previously highlighted (Hayduk, 2019). In doing so, this study makes three key contributions to the literature on mega-events and entrepreneurship. First, it extends prior research by empirically demonstrating that hosting an MSE can lead to measurable improvements in a nation’s EE, thereby bridging a gap in event legacy literature. Second, it uncovers how contextual factors (event scale and host institutions) moderate this impact, challenging conventional assumptions that all mega-events produce uniform benefits. Third, it introduces a mixed-methods approach (combining difference-in-differences with qualitative

insights) to this domain, offering a more nuanced understanding of why and how these impacts occur. Together, these contributions enrich the theoretical discourse on MSE legacies and provide evidence-based insights for policymakers aiming to leverage such events for entrepreneurial development.

2.2. Research gaps

Studies examining the relationship between MSEs and EEs have seen noticeable increase (Hayduk, 2019; Chen, Qu, & Spaans, 2013; Perić, 2018), and over the past 10 years, research on EE has gained momentum in understanding the complex interplay that arises due to varied business interactions. Thus, scholarly focus on entrepreneurship at the country level has expanded beyond the narrow domain of new venture creation (Wolfe & Shepherd, 2015). It now encompasses an ecosystem perspective on the processes of opportunity recognition, development, and exploitation, thus underscoring the role of EE in promoting, sustaining, and expanding entrepreneurial activities at the country level.

However, while host countries often acknowledge the potential for MSEs to boost entrepreneurship, a gap exists between this acknowledgment and rigorous study of it. Previous studies suggest that host cities can use MSEs to promote local EEs (Spilling, 1996; Hall, 2006; Sterken, 2006; Matheson, 2006; Chen, Qu, & Spaans, 2013; Perić, 2018), but recent bid books have not explicitly identified this as a strategic priority. Despite MSEs providing opportunities for entrepreneurship development, most bid books have not aligned their hosting with entrepreneurship promotion programs or strategic entrepreneurial goals. The literature review identifies some significant gaps in understanding the impact of MSEs on EEs, as well as the relatively unexplored intersection of EEs and MSEs in academic research.

Taken together, these gaps imply the need for comparative evidence that separates host effects from contemporaneous trends among unsuccessful bidders and traces timing around the award decision. Accordingly, the study adopts a matching-plus-DID design to compare host vs. bidder country–years around the award year, using GEI (and selected sub-pillars) as outcomes while testing theoretically motivated heterogeneity by event popularity, economic development, and rule of law (Gratton & Preuss, 2008; Isenberg, 2010; Stam, 2015; Autio et al., 2018).

First, studies focusing on MSEs and EEs fail to examine the nature and magnitude of the relationship between these two constructs. Second, although EE is emerging as a growing global phenomenon (Bruton et al., 2008), both its theory and concepts remain fragmented (Cao & Shi, 2021). Third, existing studies focus on measuring the economic and social impacts of MSEs, such as tourism and infrastructure, but research on how these events influence local EEs is scarce. Specifically, Studies on MSEs frequently rely on traditional economic metrics such as GDP growth or job creation, ignoring their impact on startups, innovation, and EE dynamics. Thus, evidence for the impacts of MSEs on EE dynamics is scarce. Furthermore, there is lack of knowledge transfer regarding the preparation process of the event itself, which is crucial for determining entrepreneurial outcomes in host nations (Ratten, 2020; Scott et al., 2022; Gleason, 2023).

Additionally, in examining EE, the current literature primarily focuses on developed hosting regions such as North America and Europe (Cao & Shi, 2021). As a result, the context of developing countries is understudied (Lingelbach et al., 2005), which makes it crucial to conduct a comparative assessment of the economic outcomes of MSEs in both developing and developed countries. Besides focusing mostly on developed countries, the few extant studies tend to focus on big businesses as the major actors in EE. For example, studies have examined the impact of MSEs on established businesses like hospitality and transportation, while overlooking implications for local entrepreneurs (Sterken, 2006). Thus, research on the influence of MSEs on local entrepreneurship and MSE-related opportunities in host nations

remains limited (Hayduk, 2019). Finally, current research on MSEs has limited focus on high-profile events like the Olympics or the World Cup, which leaves the impact of smaller or regional MSEs (Asian Games, Euro Cup, etc.) on the local entrepreneurial landscape largely unexplored.

2.3. Research questions and hypotheses

This thesis investigates the relationship between EEs and MSEs, with the research question to what extent do MSEs influence the development of EE in host countries, and what are the contextual factors of host countries (versus bidding countries) that shape this relationship. Throughout the thesis, award year (t) denotes the calendar year in which hosting rights are officially granted; pre-treatment years are denoted ($t-k$) and post-treatment years ($t+k$). To comprehensively address the research question, this study proposes four hypotheses as follows:

Hypothesis 1: The impact of MSEs on EE is greater in hosting countries than in bidding countries after the award date.

Motivated by H1, social capital theory implies that network reach and institutional quality shape the diffusion and productivity of resources mobilised by MSEs, thereby conditioning EE outcomes. In this context, three moderators are salient: event popularity (which scales attention, spending and partner search), host economic development (which raises absorptive capacity and complementary assets), and rule of law (which underpins contracting reliability and investment confidence) (Machalek & Martin, 2015; Gratton et al., 2000; Kim et al., 2006; Ritchie, 1984; Müller, 2015; Cornelissen, 2008; Maennig & Zimbalist, 2012; Hartog, Stel, & Storey, 2010; Elert, Henrekson, & Sanders, 2019; Salinas, Ortiz, & Muffatto, 2019).

Mega-sport events (MSEs) are essentially a capital inflow coming into a country in the form of foreign direct investment (FDI) (Russo & Figueira, 2021; Lertwachhara,

Tongurai, &Boonchoo 2021; Drapkin & Lupkyanov, 2020). MSEs are recognized as FDI because hosting MSEs generate physical development and infrastructure, as well as employment in multiple sectors such as tourism, retail, and the service sector. There are many studies affecting factors FDI in general, two of them are economic size of the destination country, and the investment protection country's regulation. Furthermore, it also understood that greater FDI comes with greater multiplying effect than the smaller one. Based on that understanding, in addition to investigating the first hypotheses, three additional hypotheses are investigated in this study. In addition to H1, this study proposes three moderated relationships: H2 posits that more popular MSEs exert a stronger influence on EEs; H3 posits that hosting an MSE in a more economically developed country has a greater impact on its EE; and H4 posits that hosting an MSE in a country with a stronger rule of law results in a larger EE impact.

Hypothesis 2: The impact of MSEs on EE is contingent on the popularity of MSEs, with more popular MSEs exerting a stronger influence.

Hypothesis 3: The impact of MSEs on EE is more pronounced in developed hosting countries compared to less developed ones.

Hypothesis 4: The impact of MSEs on EE is greater in hosting countries with a stronger rule of law compared those with weaker institutional frameworks.

2.4. Methodology

This thesis employs a mixed-methods approach to investigate the impact of MSEs on EE in host countries, including Russia (2018 FIFA World Cup), Korea (2018 Winter Olympics), Brazil (2016 Summer Olympics), Indonesia (2018 Asian Games), and France (2016 Euro Cup). These events were selected as they fulfil Müller's criteria for an MSE and, critically, offer complete and comparable data series

covering both the pre- and post-award periods. Accordingly, the awardee countries in the analysis include Russia, Korea, Brazil, Indonesia, and France. Furthermore, the bidder countries participating in the analysis include Belgium, Netherlands, United Kingdom, Portugal, Spain, Russia, South Korea, Germany, France, Azerbaijan, United States, Qatar, Spain, Czech, Brazil, Japan, Indonesia, Vietnam, France, Italy, and Turkey. The quantitative analysis employs a difference-in-differences (DID) regression model to evaluate the impact of MSEs over time while controlling for external factors. The study also compares host nation performance in terms of the Global Entrepreneurship Index (GEI) pre- and post-awards. Before employing DID analysis, this study also implemented coarsened exact matching (CEM) to pre-process the dataset into a robust form with low degree of imbalance.

To supplement and enrich the quantitative findings, the study uses a qualitative approach. Content analysis was conducted on various sources, including bid books, official reports, media coverage, and academic literature. Semi-structured expert interviews were conducted with subject matter experts, including policymakers involved in MSE planning and delivery, to confirm, supplement or strengthen the finding from quantitative analysis with practical perspective from policymakers. Event-specific analyses were conducted for selected host nations to examine the challenges, strategies, and outcomes associated with hosting MSEs and their effects on the EE.

2.5. Expected contributions and structure of the thesis

The current study makes several contributions. First, the investigation related to the impact of MSEs on EEs builds on the dynamic framework of EEs proposed by Stam (2015), and Acs, Autio, and Szerb (2014) demonstrating the importance of entrepreneurial ecosystem and national entrepreneur system on the growth of entrepreneurs in the country. Accordingly, this study follow up (Stam, 2015) to investigate whether mega sport events significantly influence entrepreneurial ecosystems, which influence the quality of entrepreneurs themselves. Second, the

study's findings also provides a robust theoretical framework by demonstrating the specific role of MSEs in stimulating the entrepreneurial ecosystem of the host country, which is in line with the theories of the economic impact of MSEs as proposed by Baade and Matheson (2004). For example, previous studies of MSE impacts have emphasized outcomes like economic growth and infrastructure, rarely addressing entrepreneurship. By highlighting the role of MSEs in stimulating a host's EE, this research broadens existing frameworks and shows that MSEs should be considered among the factors that drive entrepreneurial development - a novel contribution to the literature.

In addition to the theoretical impact, this study offers several practical contributions. First, the study's findings provide empirical evidence that informs MSE organization and impact assessment. By underscoring specific MSE strategies for bidding participation, building on the work of Gratton and Preuss (2008), the scientific findings of this study contribute to the urgent need stated by Gratton and Preuss (2008) of scientific studies that specifically address the association between MSEs and EEs. Second, this study builds on the multi-stakeholder approach to EE development advocated by Isenberg (2010), by highlighting the importance of collaboration between various sectors including government, private entities, and civil society, to maximise the entrepreneurial benefits of MSEs.

Consistent with the identification strategy, the study provides empirical evidence that hosting MSEs is associated with improvements in EE quality under specific contextual conditions. Relative to legacy studies centred on GDP or tourism, the thesis examines national EE quality (GEI) with identification logic and explains heterogeneity via institutional moderators and qualitative mechanisms (bid books, interviews) (Gratton & Preuss, 2008; Isenberg, 2010; Stam, 2015; Stam & Van de Ven, 2021).

The thesis is structured as follows. The literature review critically examines the current state of research on EEs and MSEs, identifying gaps and laying the

groundwork for the current investigation, as well as providing context for this study. The methodology chapter describes the mixed-method approach used, including both the quantitative and qualitative methods used to test the proposed hypotheses and answer the research questions. The results and data analysis chapter presents the findings using appropriate DID regression models and coefficient plots. Furthermore, this chapter presents qualitative findings from GEM reports, bid books, and semi-structured interviews. The thesis ends with a summary and conclusion chapter that discusses the study's limitations and suggests directions for future research.

3. LITERATURE REVIEW

This literature review is divided into four main sections. The first section provides an overview of EEs, including their conceptual definitions, key elements, measurement through the GEI, as well as their antecedents and outcomes. The second section discusses MSEs, their lifecycle, and multi-dimensional impacts. The third section examines the impact of MSEs on EEs from a sports entrepreneurship perspective. Finally, the fourth section presents the study's hypotheses on how MSEs influence various aspects of the host nation's EE.

3.1. Entrepreneurial ecosystem

This section explores the concept of entrepreneurial ecosystems (Ees), tracing their theoretical development, practical implications, and growing importance in policy and academic circles. It begins by examining the various conceptual definitions of Ees, followed by a discussion of the key elements that comprise an EE. The next section introduces the GEI as a tool for measuring the strength of EEs and details the 14 pillars of entrepreneurship that underpin the GEI. Finally, the antecedents and outcomes of EEs are explored.

3.1.1. Conceptual definitions of an entrepreneurial ecosystem (EE)

In 1993, James Moore first coined the biological metaphor “EEs” (Moore, 1993), calling it a “business ecosystem.” He described it as a network of interrelated organisations, each of which is likely to run a local firm or platform (Iansiti & Levien, 2004; Teese, 2007; Clarysse et al., 2014; Cavallo et al., 2019). Later, the concept was further popularised by US entrepreneurship academic Daniel Isenberg and several others (Isenberg, 2010, 2011; Mason and Brown, 2014; Napier and Hansen, 2011). Various studies have addressed the theoretical concept of EE in terms of its social, cultural, behavioural, institutional, and biological determinants (Sarasvathy, 2001; Baker & Nelson, 2005; Welter, 2011; Audretsch & Belitski, 2016; Brown & Mason, 2017). The practical perspective of the concept along with its theoretical implications can be found in the works of Isenberg (2011), and Napier and Hansen (2011).

Based on the literature, EE can be defined from at least two perspectives, namely, from the macro vs micro elements definition, and from the outcome-oriented definition. From the macro element perspective, EE is defined as “the interaction of systemic conditions like entrepreneurial networks, finance, talent, knowledge, and support services, and framework conditions, including social context, that facilitate or restrict human interaction” (Stam & Spigel, 2016; Cavallo et al., 2019). On the other hand, from the micro element perspective, EEs can be referred to as “a set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organizations (e.g., firms, venture capitalists, business angels, banks), institutions (e.g., universities, public sector agencies, financial bodies), and entrepreneurial processes (e.g., business birth rate, numbers of high growth firms, levels of ‘blockbuster entrepreneurship’, number of serial entrepreneurs, degree of sell-out mentality within firms, levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment.” (Mason & Brown, 2014).

From the outcome-oriented perspective, EE is defined as a “combination of social, political, economic, and cultural elements within a region that supports the

development and growth of innovative start-ups, encourages nascent entrepreneurs, and takes the risk of starting, funding, and otherwise assisting high-risk ventures" (Spigel, 2017). EE can also be defined as "the networks of actors involved in developing each function and how these functions and networks of actors interacted over time to facilitate and constrain innovation development" (Van de Ven, 1993). Additionally, "EE consist of interacting components, which foster new firm formation and associated regional entrepreneurial activities." (Mack & Meyer, 2016). Finally, Cao and Shi (2020) have defined EE as a community of multiple coevolving stakeholders that provides a supportive environment for new venture creations within a region and that "foster[s] innovation-based ventures" (Shwetzzer, Maritz, & Nguyen, 2019).

These definitions often focus on the process by which individuals explore, evaluate, and exploit opportunities for creating new goods and services, emphasizing the importance of fostering an environment that supports entrepreneurship at various levels. Additional definitions of EEs can be explored from the works of Spilling (1996), Neck et al. (2004), Cohen (2006), Isenberg (2010, 2011), Roberts and Eesley (2011), Qian et al. (2012), Feld (2012), Isenberg (2014), Acs et al. (2014), Mason and Brown (2014), Stam (2015), Mack and Mayer (2016), Cukier et al. (2016), Gauthier et al. (2017), Roundy et al. (2017), Audretsch and Belitski (2017), Auerswald and Dani (2017), Bruns et al. (2017), Kuratko et al. (2017), Theodoraki and Messeghem (2017), and Spigel (2017).

EE has taken the leading role in market-oriented industrial policies adopted in the post-global financial crisis era (Brown & Mawson, 2019). This concept is gradually becoming commonplace in public policy, and it is now widely used by governments all over the world (Brown and Mason, 2017; Isenberg, 2014; Stam, 2015), as well as by academics (Alvedalen & Boschma, 2017; Malecki, 2018; Brown & Mawson, 2019). As a result, it is fair to say that EEs have become a policy construct as well as an academic concept for scientific investigation (Malecki, 2018; Brown & Mawson, 2019). EE is further being promoted by prestigious organisations such as the

Organisation for Economic Cooperation and Development (OECD), the World Bank, and the World Economic Forum (Mason & Brown, 2014; Mulas et al., 2017; WEF, 2014; Brown & Mawson, 2019).

The EE can help fulfil a nation's economic development strategy by fostering entrepreneurial activities (Hellmann & Thiele, 2019). An EE is considered strong and sustainable when there are more start-ups, financial capital is accessible, entrepreneurship education is available, culture is supportive, and other factors can help stimulate and foster entrepreneurial activities (Cao & Shi, 2020). The robustness of the EE is also determined by collaboration and networking among various stakeholders within the ecosystem. These interactions help to enhance entrepreneurial competitiveness through fundamental mechanisms that include the development of knowledge, new skills, and expertise by finding people with the desired skill set.

Establishing an EE is a gradual process, as seen in Silicon Valley, Boston, and Singapore, which may take decades to develop. There is extensive research on matured EEs such as Singapore (Wong et al., 2007) as well as emergent EEs such as Victoria in Canada (Cohen, 2006), Estonia (Kshetri, 2014), and Waterloo in Canada (Spigel, 2017).

Based on the previously discussed definitions, studies have shown that an evolving and thriving EE consists of key elements. These include institutional arrangements, which are in charge of regulating and incentivizing entrepreneurial ventures, public resource endowments that provide basic scientific knowledge, financial mechanisms, and pools of competitive labour, market demand for consumers and the services that entrepreneurs respond to with, and proprietary business activities like R&D, manufacturing, marketing, and distribution. These elements oversee, coordinate, and carry out successful operation in EEs (Stam & Van de Ven, 2021). These key elements, when sufficiently developed, enable certain desirable outputs

and are, in return, viewed as productive entrepreneurship. The elements of EE are being discussed in section 2.1.2. below.

In summary, the various definitions of EEs underscore their multi-faceted nature, encompassing cultural, social, economic and institutional elements that collectively support entrepreneurial activity within a geography. Understanding these conceptual underpinnings is crucial for examining how EEs function in practice, which the next subsection explores through the lens of key elements of EEs.

3.1.2. Elements (domains) of EE

This section discusses the key elements or domains that constitute an EE. The first subsection covers the broad components proposed by Van de Ven (1993), followed by the six distinct domains formulated by Isenberg (2010). The next subsection delves into a selective discussion of elements influencing high-growth firms presented by Fotopoulos (2023), and the section concludes with the most recent and comprehensive model proposed by Stam and Van de Ven (2021).

The broad components of an EE, as proposed by Van de Ven (1993), include the key given elements: (a) institutional arrangements (responsible for the legitimate regulation and incentivization of the entrepreneurial venture); (b) public resource endowments of basic scientific knowledge, financial mechanisms, and pools of competitive labour; (c) market demand of consumers and services provided by the entrepreneurs in its response; and (d) proprietary business activities such as research and development (R&D), manufacturing, marketing, and distribution. The above components have been subsequently elaborated to encompass more integrated domains of an ecosystem. Isenberg (2010) has formulated six distinct domains of an EE, given as: (a) policy, (b) finance, (c) culture, (d) support, (e) human capital, and (f) markets.

Fotopoulos (2023) has presented a selective discussion of EE elements and their role in the incidence and growth of high-growth firms (HGF). He stated that the key

elements for the same are: (a) universities; (b) talent or human capital; (c) talent or creative class; (d) networks; (e) formal institutions; (f) entrepreneurial culture; (g) intermediate service; (h) finance; and (i) demand. The overall summary of these elements has been briefly discussed below:

Table 1: Domains of EE

Domain	Summary
Universities	Universities play a crucial role in a knowledge-based regional system of entrepreneurship by supplying well-educated human capital and through their involvement in innovation (Qian et al., 2013). Universities perform four major functions within an EE, namely the creation of knowledge, the production of talent, the promotion of academic entrepreneurship, and the coordination of the ecosystem (Spigel, 2020; Fotopoulos, 2023). The positive role that universities play in the growth of firms and academic start-ups can be seen in the works of Audretsch and Lehmann (2005), Cassia and Colombelli (2008), Colombo et al. (2010), and Fotopoulos (2023).
Talent or Human Capital	Talent can be treated as a broad concept and classified into two types: human capital (in terms of educational attainment), and creative class (in terms of occupational skills) (Fotopoulos, 2023). While education measures the skill or potential talent of an individual, occupation offers insights into the measure of utilised skill and the absorption of human talent and capability into an economy to convert into productive work (Florida et al., 2008). Human capital has been considered one of the key growth drivers for competitive business ventures and the improvement of facilities for innovation and promoting efficiency (Demir et al., 2017; Spigel, 2017; Backman, 2014). It is well established that managers with higher human capital make better decisions and engage in superior R&D and productive innovations (Ballot et al., 2001; Fotopoulos, 2023).
Talent or Creative Class	Occupations involving creative classes, together with occupations based on education, serve as essential pillars for the growth of an EE. Creative industries promote openness to diversity, the generation of new ideas, the breeding of innovations, and growth opportunities (Audretsch & Belitski, 2021; Sleuwagen & Ramboer, 2020). The creative class has made a substantial contribution to opportunity recognition and the production of commercially exploitable recombinant knowledge (Stuetzer et al., 2014).

Domain	Summary
Networks	<p>Sleuwagen and Ramboer (2020) have identified the positive effect of the creative class on the incidence of high-growth firms on a regional scale in the context of European Union nations.</p> <p>In an effective EE, social networking facilitates access to resources between all stakeholders. This is achieved through the creation of channels for knowledge spillovers between universities and firms, the dissemination of information on entrepreneurial opportunities, and the establishment of connections between entrepreneurs, potential financiers, and employees (Spigel, 2017; Spigel and Harrison, 2018). The network structure of businesses within regions can be explored in the works of Stam and van de Ven (2021) and Leendertse et al. (2021).</p>
Formal Institutions	<p>Formal institutions provide the fundamental preconditions for economic actions, set precedents for efficient resource use, and hence ensure welfare consequences and quality entrepreneurship (Stam & van de Ven, 2021; Fotopoulos, 2023). As a result, there is a direct association between high-growth firms and institutional frameworks (Henrekson & Johansson, 2009). An appropriate institutional framework empowers individuals by offering them the right incentives to acquire and utilise knowledge (Fotopoulos, 2023). A few key formal institutions for high-growth firms are tax structures, labour market regulations, and the contestability of service markets (Fotopoulos, 2023).</p>
Entrepreneurship Culture	<p>Entrepreneurship culture captures the degree to which entrepreneurship is socially legitimised and valued in a region (Stam & van de Ven, 2021; Leendertse et al., 2021). It is seen as an informal institution that supports networking activities and regional cooperation. The societal acceptance of entrepreneurship and the existence of services and institutions that support entrepreneurship are the key values that sustain entrepreneurship culture (Fritsch & Wyrwich, 2014; Fotopoulos, 2023).</p>
Intermediate service	<p>The presence of intermediate business services can substantially lower barriers and increase the speed of new value creation (Stam and van de Ven, 2021), particularly for high-technology start-ups and high-growth firms (Patton & Kenney, 2005), enabling the use of specialised services.</p>
Finance	<p>Local access to finance is crucial for the survival of new and small firms. The availability of financial capital allows the pursuit of capital-intensive strategies, optimal investment policies, and commercial innovations (Cooper et al., 1994; Rahaman, 2011; Lee, 2014). Investment capital serves as a major requirement for the growth of</p>

Domain	Summary
Demand	<p>start-ups, along with investors, who often act as mentors for entrepreneurs and help them address the challenges of growth (Spigel, 2017). This enables entrepreneurs to adopt more ambitious strategies necessary for the achievement and sustenance of growth.</p> <p>Entrepreneurs with a growth mindset should address markets with large potential (Isenberg, 2010). Large markets are characterised by ‘greater variety on the demand side and generate greater technological spillovers and knowledge exchange between entrepreneurs’, thereby creating more opportunities (Nicotra et al., 2018; Stam, 2015; Audretsch & Belitski, 2017; Stam, 2018; Fotopoulos, 2023).</p>

The World Economic Forum (WEF) (2013), has proposed eight pillars for a successful EE, focusing on the “presence of key factors (resources) like (a) human capital, finance, and services; (b) the actors involved in this (talent investors, mentors and advisors, entrepreneurial peers); (c) the formal (government and regulatory framework) and informal institutions (cultural support) enabling entrepreneurship; and finally (d) access to customers in domestic and foreign markets” (Stam & Van de Ven, 2021).

The most updated and recent model on EE elements has been proposed by Stam and Van de Ven (2021). Their entrepreneurial model consists of ten elements and includes the institutional arrangements and resource endowment components of infrastructure. These components can be deconstructed into (a) institutional arrangements (captured by the formal institutions, culture, and network elements); (b) resource endowments (captured by physical infrastructure, finance, leadership, talent, knowledge, intermediate services, and demand elements); and (c) proprietary functions (consisting of entrepreneurial firms commercialising innovations) (Stam & Van de Ven, 2021). The presence of these elements and their interdependence with each other is critical for the successful operation of an EE (Stam & Van de Ven, 2021).

In summary, this section has covered the various elements or domains that constitute an EE, ranging from broad components to more specific factors influencing entrepreneurial activities and high-growth firms. The models and frameworks discussed provide a solid foundation for understanding the key elements and their roles in fostering a thriving entrepreneurial environment. The strength of these elements can be assessed using tools like the GEI, which is described in the next subsection. Understanding the key elements of an EE is central to this study because clarifying these definitional elements establishes a structured framework for examining how mega-sporting events influence entrepreneurial ecosystems. By contextualizing these elements, this study is better equipped to explore specific impacts on entrepreneurial activity, resource allocation, and institutional support that may arise in host countries.

3.1.3. Measure of EE: Global Entrepreneurship Index (GEI)

This subsection introduces the GEI, a comprehensive measure for evaluating the health of EEs across countries. Empirical research on EEs revealed significant differences across regions, emphasizing the importance of understanding these environments' distinct characteristics and dynamics. Researchers extensively used the GEI in these studies to analyse and optimize EEs (Ali et al., 2021). The GEI is a useful tool for determining entrepreneurship levels, assessing the quality of the business environment, and understanding the factors that influence entrepreneurial activity. Its popularity and acceptance stem from its comprehensive approach to assessing various factors such as opportunity perception, startup skills, risk acceptance, networking, and cultural support. The GEI provides a standardized framework for researchers and policymakers to compare EEs across countries, allowing for evidence-based decision-making and policy formulation that effectively promotes entrepreneurship and economic development.

The GEI is the flagship project of the Global Entrepreneurship Development Institute (GEDI). It is an annual index measuring the health of the EE in 137 countries. The

index is based on 14 pillars (Ács, Szerb, & Lloyd, 2018), which are grouped into three sub-categories: (i) entrepreneurial attitudes (defined by opportunity perception, startup skills, risk acceptance, networking, and cultural support); (ii) entrepreneurial abilities (opportunity startup, technology absorption, human capital, and competition); and (iii) entrepreneurial aspirations (product innovation, process innovation, high growth, internationalisation, and risk capital) (Acs, Szerb, & Autio, 2017). Based on the scores obtained for each pillar, a three-tier score is generated for each participating nation, i.e., overall, GEI score, and scores for each sub-category. The composite scoring system reflects the health of the EE of the country (Ács, Szerb, & Lloyd, 2018). Thus, overall, GEI reflects the quality of the EE of a country (Acs, Szerb, & Autio, 2017).

These pillars cover a wide range of definitions of the EE, including factors like opportunity perception, startup skills, risk acceptance, networking, and cultural support. By incorporating these diverse factors, the GEI provides a holistic view of the health of EEs, making it a robust tool for policymakers, researchers, and stakeholders to assess and compare the entrepreneurial environment across different countries. Thus, the GEI has the following attributes (Ács & Szerb, 2009): (i) It is sufficiently complex to be able to capture the multidimensional features of entrepreneurship, (ii) In addition to the quantification of level-related measures, it is capable of capturing quality-related differences, and it incorporates both individual-level and institutional variables since entrepreneurship depends upon the mutual interplay of both of these variables.

The GEI serves as a benchmarking tool for policymakers who strive to monitor the impact of their policies and initiatives on entrepreneurship (Inacio Junior et al., 2020). It is capable of measuring the dynamic and institutional interactions between entrepreneurial attitudes, abilities, and aspirations that drive entrepreneurship (Acs et al., 2018; Lafuente et al., 2020). Instead of focusing on the entrepreneurial process, the GEI focuses on the systemic interactions that occur between entrepreneurial actions and institutions in a country. According to Lafuente, Ács, and

Szerb (2022), the GEI can serve as a framework to understand how these interactions can affect economic performance.

In summary, the GEI's strength lies in its ability to capture the multidimensional features of entrepreneurship by incorporating both individual-level and institutional variables, as well as quantitative and qualitative aspects. It serves as a benchmarking tool for policymakers to monitor the impact of their initiatives on entrepreneurship and understand the dynamic interactions between entrepreneurial attitudes, abilities, and aspirations that drive economic performance. The 14 pillars that underpin the GEI are detailed in the next subsection. The GEI is particularly relevant to the present study, as it provides a structured, multidimensional measure of EEs that allows for a systematic investigation into how MSEs impact various EE dimensions in host countries.

3.1.4. The 14 pillars of entrepreneurship

This subsection explores the 14 pillars that make up the GEI, categorized into three sub-indices: entrepreneurial attitudes, entrepreneurial abilities, and entrepreneurial aspirations. Each sub-index is associated with a set of pillars vital for sustaining successful entrepreneurship. They have been summarised below:

(a) Pillars pertaining to Entrepreneurial Attitudes

Table 2: Pillars pertaining to Entrepreneurial Attitudes

Pillar	Description
Pillar 1: Opportunity Perception	This pillar is a function of the size of the domestic market in a country and its level of urbanisation. The individual and institutional variables aligned with the given pillar are 'Opportunity Recognition' and 'Market Agglomeration', respectively (Acs & Varga, 2005).
Pillar 2: Startup skills	The skills required for the running of a successful startup, mainly in developed nations, can be acquired through workplace experience in businesses through trial and error. A

Pillar	Description
	more advanced and sophisticated skill set can be acquired through formal education and training. This empowers the entrepreneurs with skills related to business formation, operation management, marketing, and distribution etc. (Papagiannidis & Li, 2005).
Pillar 3: Risk Acceptance	This pillar addresses personal traits of the entrepreneur and has the potential to pose substantial setbacks to any startup. Budding and nascent entrepreneurs often fear losses and risks. As a result, they get discouraged from setting up high-risk enterprises. The risks involved can be associated with financial information from corporations, legal frameworks that safeguard the interests of creditors, and institutional support for the facilitation of intercompany transactions (Caliendo et al., 2009).
Pillar 4: Networking	This pillar represents the entrepreneur's personal knowledge of identifying viable opportunities and accessing better resources by knowing relevant entrepreneurs. The use of the internet and connecting cyberspace for business purposes also forms another important aspect of this pillar (Shane & Cable, 2002).
Pillar 5: Cultural Support	This pillar takes into account how the inhabitants of a country perceive entrepreneurs in terms of societal respect and status, and views in regards to entrepreneurship as a career choice. This viewpoint serves as a compelling factor behind the bright minds of a nation pursuing entrepreneurship instead of entering traditional professions. The institutional variable associated with this pillar is the level of corruption in the concerned country. High levels of corruption often disrupt the career paths of legitimate entrepreneurs and undermine their high status (Acs et al., 2017).

(b) Pillars pertaining to Entrepreneurial Abilities

Table 3: Pillars pertaining to Entrepreneurial Abilities

Pillar	Description
Pillar 6: Opportunity Startup	This pillar measures startups by motivated entrepreneurs facing regulatory constraints. This concept has two

Pillar	Description
	<p>fundamental ingredients: opportunity entrepreneurs and opportunity motivation. Opportunity entrepreneurs are equipped with better skills to handle challenges, possess superior skills, and have better chances of earning than necessity entrepreneurs. Opportunity motivation, on the other hand, is defined as the “percentage of the total entrepreneurial activity (TEA) businesses started either to exploit a good opportunity, to increase income, or to fulfil personal aims” (Acs et al., 2017). The institutional variable associated with the said pillar is “business freedom” (Bhola et al., 2006).</p>
Pillar 7: Technology Absorption	<p>This pillar plays a crucial role in the development of an economy by fostering information and communication technology (ICT). The induction of ICT in technology sectors is defined by a variable called the technology level. The institutional variable associated with this pillar is “tech absorption.” This measures the capacity of a country to absorb firm-level technologies as per guidelines by the WEF (Coad & Rao, 2008).</p>
Pillar 8: Human Capital	<p>The role of an educated, experienced, and healthy workforce in supporting the growth of highly innovative ventures cannot be undermined. High-quality human capital ensures high growth potential of an enterprise. Entrepreneurs with degrees in higher education are more capable and motivated to run high-growth businesses. The quality of employees also affects the scale of business development, innovation, and logistics. The institutional variable addressed by this pillar is “staff training,” which focuses on the level of investment offered by a country in training and development for its businessmen and employees. This has direct implications for the growth of an EE (Bates, 1990).</p>
Pillar 9: Competition	<p>This pillar refers to the product and market uniqueness of a given business. The presence of existing businesses or the dominance of powerful market leaders and business groups can challenge the market entry of new ventures. The institutional variable associated with competition is called “market dominance,” which serves as a measure of the extent of market dominance by a few existing business groups (Baumol et al., 2007).</p>

(c) Pillars pertaining to Entrepreneurial Aspirations

Table 4: Pillars pertaining to Entrepreneurial Aspirations

Pillar	Description
Pillar 10: Product Innovation	Innovation is the key to either introducing new products or imitating existing products. Developing countries, in particular, are driving their economies by producing innovative products that are significantly cheaper than their Western counterparts. The institutional variable associated with this pillar is “technology transfer.” It is a complex measure of the knowledge transfer of concepts for innovative applications and business environments for the development of new products (Acs et al., 2017).
Pillar 11: Process Innovation	An important feature of businesses offering high growth potential is the application and/or creation of new technology. Businesses whose principal underlying technologies have been developed in less than 5 years fall under the realm of “new technology.”. The institutional variable applied here is R&D. Lack of systematic research activity inhibits the development of new technologies, hence hindering future growth (Stam & Wennberg, 2009).
Pillar 12: High Growth	This pillar is a more appropriate measure of expected growth than actual, realised growth. It includes the percentage of high-growth enterprises that aim to employ at least ten people, have a projected growth rate of 50% in the coming 5 years (Gazelle variable), and adopt sophisticated business strategies (Business Strategy Variable) (Acs et al., 2008).
Pillar 13: Internationalisation	This pillar is dependent on the degree of globalisation and the openness of a country to international entrepreneurs. Exports form an important aspect of internationalisation as they foster a globalised economy through foreign trade, revenue, and related growth in businesses. The institutional variable associated with the current pillar is the potential for internationalisation and economic globalisation (De Clereq et al., 2005).
Pillar 14: Risk Capital	Facilitating risk finance and offering equity instead of debt to individual entrepreneurs can safeguard their financial resources. This capital can be invested either in the form of informal investment, or institutional depth of capital investment

Pillar	Description
	(DCM). The institutional variable associated with the present pillar is DCM, which is defined as “a complex measure of the size and liquidity of the stock market, level of IPO and M&A, and depth and credit market activity, encompassing seven aspects of a country’s debt and capital market” (Groh et al., 2012; Acs et al., 2017).

GEI is a three-component index that takes the different facets of an EE into account. These three components, called sub-indices, serve as complex measures to encapsulate entrepreneurial attitudes, entrepreneurial abilities, and entrepreneurial aspirations. The given sub-indices are called the Entrepreneurial Attitudes sub-index (ATT), Entrepreneurial Abilities sub-index (ABT), and Entrepreneurial Aspirations sub-index (ASP). Each one of the three building blocks or sub-indices affects the remaining two. The relationships between the GEI, its sub-indexes listed above, and national per capita wealth based on the purchasing power parity GDP have been studied in detail by Acs et al. (2017).

ATT bears a strong correlation with per capita GDP, implying that overall entrepreneurial attitudes increase with the development of a country. Both ABT and ASP also show a strong and significant correlation with GDP, implying a direct relationship between entrepreneurship and development (Acs et al., 2017). Based on the above parameters, GEI has routinely been used to examine the correlation between economic growth and high-quality entrepreneurship in countries (Inacio Junior et al., 2020).

The GEI and its 14 pillars provide a robust framework for measuring the quality of EEs across countries. This enables policymakers, researchers and other stakeholders to benchmark EE performance and examine the factors that shape EE development, including the hosting of mega-events like MSEs.

The GEI and its 14 pillars are closely related to both the antecedents and outcomes of an EE. The pillars under the entrepreneurial attitudes and entrepreneurial abilities

sub-indices capture key antecedents or drivers of a thriving EE, such as opportunity perception, risk acceptance, human capital, and access to finance. Meanwhile, the pillars under the entrepreneurial aspirations sub-index represent desired outcomes of a healthy EE, including innovation, high growth ventures, and internationalization. By measuring these antecedents and outcomes through its comprehensive framework, the GEI provides a holistic assessment of an EE's overall health and performance.

3.1.5. Antecedents and outcomes of EE

This subsection examines the factors that give rise to and shape EEs, as well as the outcomes and impacts of strong EEs on economic and social development. It highlights the role of various factors, including social, cultural, and environmental aspects, in stimulating entrepreneurial activities and supporting the growth of EEs.

The EE encompasses an interconnected network of factors that support and foster entrepreneurial activity within a particular region or industry. The antecedents of a thriving EE include a supportive regulatory framework, access to capital and funding sources, availability of skilled human resources, and a culture that embraces innovation and risk-taking. Moreover, the presence of mentorship programs, incubators, and accelerators play a crucial role in nurturing entrepreneurial ventures. A robust EE can lead to several positive outcomes, such as job creation, economic growth, and commercialization of innovative products and services. Successful entrepreneurial ventures not only contribute to the local economy, but also attract talent, investment, and attention from various stakeholders, including the government, investors, and general public. Multiple factors (e.g., social, environmental, etc.) can stimulate entrepreneurial activities and sport, including MSEs, and are among the key factors that can generate and drive entrepreneurial activities in a country (Wolfe & Shepherd, 2015).

MSEs, such as the Olympic Games or the FIFA World Cup, can serve as catalysts for the development and enhancement of entrepreneurial ecosystems. The organization and hosting of these large-scale events often requires significant investments in infrastructure, transportation, accommodation, and other related services. This demand creates opportunities for entrepreneurs to establish new businesses or expand existing ones, catering to the needs of athletes, spectators, and organizers. Furthermore, MSEs can attract global attention and investment, fostering an environment conducive to entrepreneurship. The influx of visitors and media coverage can showcase the host city or country's capabilities, potentially attracting talent, capital, and partnerships from around the world. Furthermore, legacy infrastructure and facilities left behind after the events can provide a foundation for future entrepreneurial endeavours, especially in sectors like hospitality, tourism, and sports-related industries.

Understanding key conceptualizations of EEs and metrics for measuring their success and/or limitations is integral to this study, which examines the relationship between MSEs and EE performance in host countries. These theories and measurements provide essential context and a foundational understanding of the concepts central to this research, offering insight into how MSEs may influence EE dynamics.

In summary, this section introduced the concept of EEs, their definitions, elements, measurement, and the factors that shape their development and outcomes. It provided a comprehensive overview of the key concepts and theories relevant to understanding EEs and their significance in driving entrepreneurial activity and economic growth. Understanding this literature is beneficial to strengthen and validate the analysis of MSEs, particularly regarding the determinants of entrepreneurial ecosystem. However, one gap highlighted in extant literature is the lack of attention to major exogenous events (like MSEs) in EE research. Addressing this gap, the next chapter will examine how MSEs might influence entrepreneurial ecosystems, thereby extending EE theory into the context of MSEs.

3.2. Mega Sporting Events (MSEs)

This section examines the phenomenon of MSEs in detail. It starts by providing an overview of MSEs, their characteristics as a distinct type of mega-event, and their typical lifecycle. It then analyses the economic, social, environmental and political impacts of MSEs on host nations. Together, these subsections paint a comprehensive picture of MSEs and their significance.

3.2.1. Overview of MSEs

This subsection introduces the concept of MSEs and their growing importance in the global sporting and economic landscape. MSEs are large-scale events that draw spectators and visitors from different walks of life and demographics. In terms of economic impact, MSEs are expected to attract significant investment to construct event-related facilities and infrastructure in the host nation (Spilling, 1996; Hall, 2006; Sterken, 2006). Simultaneously, there are event-related expenses that must be borne by the hosting nation. The impact of MSEs on the economy of the host nation is among the key areas of academic interest revolving around MSEs (Taha & Allan, 2020). An example can be seen in the leveraging of MSEs like the 2022 FIFA World Cup to build and enhance the brand image of Qatar.

Academic interest in MSEs primarily focuses on the ex-ante and ex-post evaluation of the impact of the event on a host nation's society, environment, tourism, reimagining of host cities, and economic development (Rojas-Méndez et al., 2019; Taha & Allan, 2020). Within the context of economic development, researchers examine aspects of profits and losses and the generation of entrepreneurial opportunities (Groothuis & Rotthoff, 2016).

Although MSEs are considered drivers of regional economic development, there has been limited effort to analyse how the EEs can be adapted to leverage the opportunities generated during these events. There is a general consensus that “a

strategic approach to event planning and leveraging is important to engender positive legacies that benefit broader communities than the host city” (Ritchie, Chien, & Shipway, 2020). Therefore, analysing the impact of MSEs on the EEs of host nations can help them leverage entrepreneurial opportunities created by MSEs, as well as maximise the entrepreneurial outcomes of future events.

MSEs can have a significant impact on the entrepreneurial ecosystem by increasing economic activity and investment in host cities and countries. This influx of resources enables entrepreneurs to start new businesses, or expand existing ones while catering to the needs of athletes, spectators, and organizers. However, ignoring this potential can result in lost opportunities for economic growth and job creation. MSEs frequently require significant investments in infrastructure, such as transportation systems, lodging facilities, and event venues, which can serve as the foundation for future entrepreneurial ventures. Thus, ignoring this potential can stifle the growth of the local EEs. MSEs can promote innovation and creativity in a variety of fields, including technology, logistics, and event management. Host cities and countries can maximize the long-term benefits of MSEs by recognizing and capitalizing on the synergies that exist between MSEs and the EE. However, there is a lack of focus on assessing the impact of MSEs on the wider context of the EE of the host nation.

In summary, this subsection sets the stage for a more detailed examination of MSEs as a specific type of mega-event in the next subsection.

3.2.2. MSE: A type of Mega Event

This subsection positions MSEs as a specific type of mega-event, distinguished by their scale, scope, and impact. Müller (2015) has identified relevant characteristics of mega-events and proposed four key dimensions that constitute integral components to better understand their definition, such as visitor attractiveness, mediated outreach, cost, and transformative impact.

According to Müller (2015), mega events are occasions of a fixed duration that can generate visitor attractiveness. Ritchie (1984) has conceptualised mega-events as tourist attractions, defined by the number of visitors who attend them. Marris (1987) has suggested a minimum number of one million visitors in order for an event to be called a mega-event. Since primary surveys for visitor counts were unconstrained, the number of tickets sold across a large number of events became the proxy for the variable of visitor attractiveness. This is, however, inconclusive and bears limitations (such as duration of events, absence or availability of a limited number of seats, etc.). Yet, the largest events, such as the Summer Olympics (London, 2012) and FIFA World Cup (South Africa, 2010), exceeded the threshold of one million tickets sold, thus qualifying as mega-events (Müller, 2015).

Another characteristic of mega events is the involvement of the media in broadcasting and spreading the event wide. With the advent of broadcasting events, a vast majority of people do not travel and watch the event in situ; instead, they do so in front of a screen (Horne, 2007; Sugden & Tomlinson, 2012). This has led to a massive boost in media coverage, thus supporting EEs in host nations. The wide attention of the media is crucial in creating a celebratory atmosphere, and turning mega-events into spectacles (Rojek, 2014; Tomlinson, 1996). As a result, awareness and brand building around the host cities and countries drastically improves (Grix, 2012; Zhang & Zhao, 2009). Global viewership figures are often touted by eminent organisations such as the International Olympic Committee (IOC) and the International Federation of Association Football (FIFA). Still, they are considered rough estimates, unreliable, overexaggerated, and manipulated in several studies (Horne, 2007; Maennig & Zimbalist, 2012). The scale of mega-events can be evidenced by the revenues from the broadcasting rights of the Summer Olympics in London (2012) (USD 2.5 billion) (Source: National Audit Office, cited from Müller, 2015) and the Asian Games in Guangzhou (2010) (USD 75 million) (Source: Xinhua, Müller, 2015).

Cost is also another factor that differentiates mega events from other types of events. Mega-events cost huge capital, amounting to billions of dollars. The money involved is usually spent on infrastructure required for hosting the event (transport, venues), organisational expenditures (salaries, temporary overlays, and security), and miscellaneous (sub-contractors, catering, IT, and overheads). This, combined with organisational challenges and time pressure, often results in cost overruns (Flyvbjerg & Stewart, 2012). Müller (2015) compiled nine large events held between 2010 and 2013, including the Expo (Shanghai, 2010), the Olympic Summer Games (London, 2012), the Asian Games (Guangzhou, 2010), the Football World Cup (South Africa, 2010), the European Football Championship (Ukraine and Poland, 2012), the Commonwealth Games (Delhi, 2010), the Universiade (Kazan, 2013), and the Pan American Games (Guadalajara, 2011). The combined cost of these large events is estimated at USD 163 billion (Müller, 2015).

Finally, mega events are also characterized by their ability to promote urban transformation. Mega-events often serve as viable platforms for host nations to foster infrastructural development, urban renewal, and the upgrading of built-in environments. The smooth hosting of mega-events often requires the construction or upgrade of stadiums, conference facilities, and transportation (roads, railways, and metro lines). Host nations strategically use mega-events for urban transformation by leveraging funds that would not be available otherwise (Grix, 2013; Hiller, 2000a, 2000b; Smith, 2012; Müller, 2015). These long-lasting transformative impacts have even been encouraged by governing bodies like the IOC and the FIFA, under the label of 'legacy' (Müller, 2015). Such impacts, however, have also been associated with a complex of negative symptoms involving "displacement of people, gentrification, commercialization of public space, or environmental damage" (Gaffney, 2010; Horne, 2007; Lenskyj, 2002; Müller, 2014b; Müller, 2015).

It is critical to emphasize that mega-events such as MSEs must have long-term consequences, including significant and/or permanent urban effects (Roche, 1994; Hiller, 2000b), additionally affecting entire economies (Gold & Gold, 2011). They

must have a significant impact on urban transformation of host city, region, or country, as demonstrated by Guangzhou and Poland, which used their hosted mega-events to modernize highways and infrastructure during the Asian Games 2010 and Euro 2012, respectively. This phenomenon is more common in emerging economies and has a significant impact on urban transformations (Müller, 2015).

In order to constrain the size of any sporting event, Müller (2015) developed size indicators. These indicators are listed as: (a) the number of tickets sold (in millions); (b) revenue generated through broadcasting rights (in USD million); (c) capital investment (including total costs); and (d) operational budgets (in USD million). Müller (2015) proposed dividing the above four dimensions into three size categories namely 'L', 'XL', and 'XXL'.

A point scoring scheme was devised, and dimensions L, XL, and XXL were allotted to the major, mega, and giga events, respectively. Sporting events categorised into major events, mega events and giga events by Müller (2015) have been given below. These classifications based on size do not represent notional values but are based on the actual sizes of current mega-events. Large events are multidimensional, and they can become larger through the adoption of broad transformational agendas by host cities and countries (Müller, 2015).

Table 5: Examples of events by size

Major events	Mega events	Giga events
<ul style="list-style-type: none"> • The Commonwealth Games (Delhi, 2010) • Universiade (Kazan, 2013) • Rugby World Cup (New Zealand, 2011) • Pan American Games (Guadalajara, 2011) • Super Bowl (New Orleans, 2013) 	<ul style="list-style-type: none"> • Euro (hosted jointly by Ukraine and Poland in 2012) • FIFA World Cup (hosted by South Africa in 2010) • Expo (hosted by Shanghai in 2010) • Asian Games (hosted by Guangzhou in 2010) • Olympic Winter Games (hosted by Vancouver in 2010) 	<ul style="list-style-type: none"> • Olympic Summer Games (London, 2012)

These classifications based on size do not represent notional values, but are instead based on the actual sizes of current mega-events. Large events are multidimensional, and they can become larger through the adoption of broad transformational agendas by host cities and countries (Müller, 2015).

MSEs are also classified based on their scope of participation, exposure level, profile, and territorial scope (global versus continental or regional) (Müller, 2015; Bravo et al., 2018). These events have been categorised into first-, second-, and third-order events. The Olympic Games and the FIFA World Cup are examples of first-order events since they have the greatest reach in terms of prestige, interest, attendance, and publicity. Second-order events, such as the Commonwealth Games, World Military Games, and World University Games, are smaller in scope and participation than first-order events. Third-order events, such as the Central American and Caribbean Games, the South Asian Games, and the Copa America in football, are much more limited in scope than the first two (Bravo et al., 2018).

This subsection has discussed the key characteristics that define MSEs, such as their visitor attractiveness, mediated outreach, cost, and transformative impact on host cities and countries. MSEs are also classified based on their scope of participation, exposure level, profile, and territorial scope. Understanding these characteristics is crucial for examining the lifecycle of MSEs, which is discussed in the next subsection.

3.2.3. Lifecycle of MSEs

This subsection outlines the typical lifecycle of an MSE, from the initial vision and concept development, through the bidding and planning stages, to the actual event delivery and post-event legacy. It highlights the key stages and milestones in the MSE lifecycle, such as bid book design and submission, award, preparation, hosting, and legacy.

The Mega Sporting Events Platform for Human Rights (Mega-Sporting Events Platform for Human Rights 2018.) presents an overview of the MSE lifecycle. As per their study, the typical lifecycle of an MSE can be summed up in the following stages: (a) vision, concept, and legacy; (b) bidding, planning, and design; (c) income generation; (d) sustainable sourcing; (e) construction; (f) delivery and operations; (g) competition; and (h) legacy.

Swart and Mammadov (2022) have mapped the typical cycle of an MSE into six stages, i.e., (a) bid book design and submission, (b) bid process, (c) award, (d) preparation for MSE, (e) hosting of MSE, and (f) MSE legacy. The preparation for an MSE ideally commences years before the event is hosted, and after the successful completion of the event, the legacy lasts forever.

In summary, the significant impacts of MSEs on host nations, especially in the economic realm, point to their potential to shape entrepreneurial activity. The next section directly examines this impact of MSEs on EEs.

3.2.4. Impacts of MSEs

This subsection provides a comprehensive analysis of the multi-dimensional impacts of MSEs on host nations, covering economic, social, environmental, and political aspects. Several potential economic impacts of MSEs on employment and investment have been highlighted at the local, regional, and national levels. To adequately summarise the impacts of MSEs, Gleason (2023) has identified four separate categories: economic impact, intangible impact, legacy, and sustainability.

Economic impact

Economic impact is determined by assessing the value produced as well as the value of the resources used in production. However, value can have a variety of meanings in economic parlance (Andersson et al., 2008). The economic impacts of hosting an MSE, such as the Olympics or the FIFA World Cup, have received the

most quantitative research, with the goal of determining how economic factors are affected before, during, and after their duration. To determine the economic viability of hosting such a large sporting event in a host city, the effects on tourism, employment, infrastructure development, and international trade have all been concurrently studied (Gleason, 2023).

Impact on tourism

MSEs like the Olympic Games and FIFA World Cup have attracted a global audience and shaped world tourism patterns, introducing new destinations and creating lasting legacies in host cities or countries (Horne & Manzenreiter, 2004). MSEs increase the number of tourists during the event year. Fourie and Santana-Gallego (2011) estimate that MSEs increase predicted tourism by about 8% in the year of hosting. MSEs such as the Summer Olympics and the FIFA World Cup appear to have a significant positive impact on tourism (Fourie & Santana-Gallego, 2011). Their research concludes that tourists from participating countries increased more than tourists from non-participating countries, which has important implications for countries considering bidding for MSEs.

Foreign tourists must pay for hotels, transport, food, and event tickets when attending MSEs. Host cities see this as an opportunity to promote future tourism even after the MSE concludes. Thousands of hotel and lodging rooms are required simply to accommodate the arrival of athletes and coaches (Baade & Matheson 2016). Tourists, both those attending the games and those simply visiting for the festivities, boost business in the host city by increasing foreign inflows due to expenditures. As a result, host cities frequently use opportunities such as MSEs to promote their city as a tourist destination. MSEs are even included in some countries' national and regional tourism plans (Jago et al., 2010; Gleason, 2023).

Increased awareness is a tool for boosting inbound tourism. This has been demonstrated by the 1988 Summer Olympics in Seoul. The hosting of this MSE generated an estimated 1 million additional tourist receipts, creating an extra income

of \$1.33 billion. Similarly, in terms of regional long-term impacts, the 1992 Summer Olympics in Barcelona is regarded as one of the most successful MSEs.. Arrivals to Barcelona increased significantly in the three years following the Games, with growth averaging nearly 20% per year (Brunet, 1995).

Therefore, it is well established that tourism in host nations gets a significant boost through MSEs. However, the impact of MSEs on tourism is insignificant when analysed using economic analysis tools. While foreign inflows rise due to increased tourist spending, the overall expenditure change in host cities is overstated due to (a) the substitution effect (consumers spending money on sporting events rather than other activities), (b) the crowding-out effect (visitors who do not come because of the event), and (c) leakages (expenses that leave the local economy) (Chanaron, 2014). These factors hinder economies from fully utilising MSEs as tourist attractions (Mobilian, 2016; Addair, 2020; Gleason, 2023).

MSEs enhance cultural identity and products through opening ceremonies, promoting host nation culture, increasing awareness, introducing new infrastructure, and offering additional tourist products, all backed by improved service quality (Solberg & Preuss, 2006; Preuss, 2006).

Impact on employment

The economic impact of hosting an MSE is significantly influenced by the increased demand for jobs related to the preparation and operation of the event, primarily arising from the development and construction of infrastructure like housing and event venues (Jago et al. 2010). During the construction phase, jobs are created, skills are developed, and cash is injected into local businesses, which can help meet short-term economic needs, contribute to long-term poverty alleviation, and increase the host destination's workforce's skill base (Jago et al. 2010).

According to Preuss (1998), the Olympic Games have a significant employment impact. These MSEs not only create new jobs but also maintain existing ones. According to Hotchkiss, Moore, and Zobay (2003), hosting the 1996 Summer Olympic Games increased employment by 17% in Georgia state counties affiliated with and close to Olympic activity, compared to other counties in Georgia. Tucker (2006) published a thorough review of the literature as well as a new comprehensive theoretical model to assess the deviation from expected city employment in Seoul, Barcelona, Atlanta, Sydney, and Athens. His conclusions appear to be intriguing. It was observed that there is a positive impact on employment as a result of MSEs. Construction and increased international visibility increased employment levels long before the MSEs were staged. In spite of this, the authors observed a significant increase in job creation only one year after the Games. According to the study, the Olympics create more jobs in wealthier countries than in poorer countries, most likely because wealthier countries are better positioned to capitalise on the opportunities provided by the Games (foreign direct investment, tourism, etc.) (Tucker, 2006).

There are, however, a few limitations on the scope of employment opportunities generated through the hosting of MSEs in host nations. Articles on the effects of employment provide a wide range of outcomes and explanations for employment shocks. First, research indicates that while employment may increase prior to or during the MSE, these increases are short-lived and lower than expected (Baade & Matheson 2016). Because there is no need for new buildings or event-related vendors, many unskilled labourers are unable to leverage the jobs they received in preparation for the games for anything else after the events have finished. As a result, hosting an MSE is viewed as an opportunity cost that brings in temporary jobs and tourists, rather than a long-term economic investment plan (Baade & Matheson 2016).

Impact on infrastructure development and urban changes

The Olympic Games have a number of physical consequences (Chalkley & Essex, 1999, 2015), related to urban changes and infrastructure. MSEs are catalysts for urban change, providing sports facilities, environmental construction, and urban renewal. They impact road systems, public transport, air terminals, and parks. Following the 2000 Summer Olympics in Sydney, there has been a shift towards sustainable development, emphasising solar power, recycled water, passive heating and cooling, and reducing car dependence.

MSE-related construction can be classified into primary, secondary, and tertiary structures. Primary structures are frequently built for the sole purpose of hosting a sporting event (for example, stadiums and sports facilities). Secondary structures are frequently impacted by multi-sport events (for example, housing and neighbourhoods built for athletes and media representatives, recreational arenas, parks, etc.). Tertiary structures, on the other hand, encompass all aspects required to stage large sporting events, particularly for tourists (for example, the construction or redevelopment of airports, railways, hotels, public transport, etc.) (Ame Solberg & Preuss, 2004).

MSE infrastructure is characterised by the unique sporting and ancillary facilities built specifically for the event. The Olympic Games, for example, necessitate specialised stadiums to accommodate a variety of events. Developing cities may have stadiums, but adding sports events requires significant infrastructure investments from even the wealthiest hosts (Baade & Matheson 2016). Other MSE-planned infrastructural development comes in the form of improvements in transport (highways and airports) and hotels, thereby creating a long-term infrastructure for the city that investors and tourists can use. Host cities often market themselves and invest in public infrastructure like entrepreneurs in order to attract growth and business startups (Gleason, 2023).

In addition to all the positive impacts of infrastructural developments attributed to the hosting of MSEs, the latter also bears adverse impacts. Cost overruns are becoming

more common, and as a result, host cities' infrastructure budget deficits often burden local communities. Local organising committees for hosting MSEs often have no liability for the costs, and private investors often fail to recover them. This leads to massive sports facilities becoming tax liabilities for cities, funded through public subsidies. This denial of other public infrastructure needs results in a deficit to be paid back over time, highlighting the need for better infrastructure management (Gleason, 2023).

Impact on international trade

The economic advantages of hosting an MSE are numerous, but there is significant impact on a country's trade. Countries that hosted specific MSEs experienced significant increases in international trade and foreign direct investment prior to, during, and after the event (Rose & Spiegel 2011; Lertwachara, Tongurai, & Boonchoo, 2021). MSEs, such as the Olympics, may be used by countries to credibly signal their intention to pursue more open trade policies. This could provide enough valuable benefits, such as increased investment in the country, to offset the costs of hosting the sporting event (Rose & Spiegel, 2011).

Hosting an international event like an MSE signifies global competition and offers countries trade opportunities, resulting in greater trade impacts for certain cities and events, thus signalling a desire to compete globally. Lertwachara et al. (2021) discovered that hosting the FIFA World Cup has a greater impact before the games, whereas the Olympic Games have a greater increase in FDI after the games (Lertwachara et al., 2021). The study revealed that less-developed countries in the Middle East, South Africa, and Latin America experienced the highest surge in FDI due to their previous lack of global prominence (Gleason, 2023).

Lertwachara et al. (2021) has examined the impact of hosting MSEs on inward FDI in countries hosting the Olympic Games, FIFA World Cup, UEFA Championship, and Asian Games between 1960 and 2018. The study found that host nations experienced beneficial effects, with increased FDI inflows after announcements and

until the event year. However, hosting the Asian Games led to a negative change in FDIs.

Impact on stock value

The city chosen to host the Olympic Games boosts the stock value of specific industries, including building materials, developers, engineering, and services (Berman et al., 2000). Companies that advertise and sponsor the Summer and Winter Olympic Games see a significant increase in stock value, according to Yelkur et al. (2012). Companies serving as official sponsors to the MSEs, such as Visa, Coca-Cola, and McDonalds, experience a significant increase in stock value, outperforming other firms' returns (Chanaron, 2014).

Intangible impact

Intangible impacts are more difficult to quantify. Both participant-based and spectator-based events have an intangible, primarily social impact. Participant-centred events emphasise subcultural capital, sports participation, social cohesion, and community development. In spectator-based events, research focuses on the event's experience, perceived prestige, quality, and attributes in relation to consumer representations. Key factors discussed include satisfaction, willingness to pay, attachment, loyalty, and behavioural intentions. These factors can result in a sense of attachment to the location, intentions to recommend the event, and an impact on the destination's image (Zourgani & Ait-Bihi, 2023). These effects include providing local populations with a psychological sense of pride, bestowing an opportunity to market a country with a more positive global image, and providing political figures with justification for policy plans. Their impacts have been discussed below.

Impact on public image

One of the primary reasons cities submit bids for MSEs is the opportunity to establish or improve their global image, which will boost tourism and global opinions in the

long run (Kirkup & Major 2010; Matheson 2012; Jago et al. 2010). Because of widespread media attention, MSE host cities have an easy opportunity to create a new public image. Few countries have seen long-term gains from MSE-related brand destination initiatives. International media coverage has aided cities such as Barcelona and Salt Lake City (Matheson, 2012). Los Angeles was publicly promoted as a successful MSE host and tourist destination following the 1984 Summer Olympics (Burton, 2003). These cities benefited from global media attention while hosting MSEs, which helped to raise their international profile.

However, global media attention can also have negative consequences for host cities if not properly managed. Cases like the 1976 Montreal Summer Olympics, the 2014 FIFA World Cup, and the 2016 Summer Olympics in Rio de Janeiro highlight misallocations, cost overruns, poor administration, and corruption (Burton, 2003; Kirby & Crabb, 2019). Other instances include failure to leverage long-term tourism efforts, such as the 2000 Sydney Summer Olympics (Kirkup & Major 2010). The 2000 Summer Olympics in Sydney had the potential to accelerate the public image of 'Brand Australia' with the development of its profile over a 10-year period (PricewaterhouseCoopers, 2002), owing to the massive media coverage and an estimated global TV audience of 3.7 billion (Tourism Australia, 2001; Kirkup & Major, 2010). This could have a long-term impact on the tourism industry in Australia, furthering the legacy of the Sydney Olympics. However, the North South Wales state government cut its tourism budget, losing tourists to Victoria and Queensland, despite the potential impact on the tourism industry, thereby failing to amplify future tourism initiatives (Kirkup & Major, 2010).

MSEs hold significant symbolic significance, solidifying the image of a city, region, or country. However, the event's global exposure relies on media representatives and cannot be entirely controlled by the organisers. Negative incidents, such as safety issues, organisational shortcomings, or bad weather, can negatively impact the host's image, affecting potential visitors, customers, or business partners.

Impact on civic pride

Hosting an MSE can instil a sense of national honour and dignity in a country's constituents, including the host city. The majority of research considers civic pride to be nothing more than a positive externality with immeasurable value. In any case, feelings of pride and support for the prospect of hosting an MSE have been shown to have a significant impact on both the success and public participation in the planning of the MSE (Kassens-Noor & Lauermann, 2017; Nunkoo et al., 2018), as well as the willingness to host mega events in the future (Lee & Krohn, 2013). Civic pride has a significant impact on host-city populations' success and support before, during, and after MSEs (Gleason, 2023).

In spite of these positive attributes, several studies question the effectiveness of leveraging civic pride in a country. These studies infer that, without a comprehensive strategy, its value in non-host regions diminishes. Müller (2015) explores the potential for underrepresenting the costs and benefits of MSEs through civic pride, potentially causing public outrage due to cost overruns.

While civic pride can generate a sense of unity and enthusiasm, its effectiveness may be limited by factors such as geographic proximity to the event and the inclusion of diverse regional perspectives. Research highlights that civic pride can often be disproportionately concentrated in host cities, leaving peripheral regions with fewer tangible benefits, which may exacerbate feelings of exclusion or even resentment (Müller, 2015). This disparity underscores the importance of implementing a well-rounded, inclusive strategy that extends the reach of MSE benefits beyond the immediate host city, addressing potential dissatisfaction that could emerge from cost overruns and unevenly distributed gains. Developing such strategies could enhance civic pride's positive impact across a broader spectrum, aligning public support with national objectives for future MSEs.

Social and cultural impact

MSEs can positively impact the host region's sociocultural environment, including city construction, media imagination, political system, labour market, cultural and sociological learning, as well as economic and technological progress, thereby enhancing the local city and its residents (Moragas de Botella, 1995).

The Olympics have significant socio-cultural impacts on the host city, organisation, and construction. They can increase local interest and participation in sports, strengthen regional traditions and values, and foster pride and community spirit. Increased sports participation positively impacts individual and community quality of life, promoting well-being, self-fulfilment, and social interaction. For instance, Barcelona experienced a significant increase in participation from new social sectors in active sports after the Olympics. This highlights the importance of promoting sports for all (Malfas et al., 2004).

Political leverage

International sports federations, media, and politicians must collaborate to stage successful events and improve political networks, such as partnerships with the central government. Increased sports knowledge, networks, and a sports city's image can lead to grassroots coaching programmes, schooling facilities, and future event-hosting opportunities. (Preuss, 2006).

MSEs provide politicians with a common vision to gain international prestige, emotionally engage citizens, and inspire the private industry. Hosting such events creates local identification, vision, and motivation. For instance, the 1988 Olympic Games in Seoul created a national perspective, vitality, participation, recognition, and an international perception of being modern and technologically advanced (Denis et al., 2007; Preuss, 2006).

Legacy

Preuss (2010) defines MSE legacy as "all planned and unplanned, positive and negative, tangible and intangible structures created for and by a sporting event that last longer than the event itself."

Gratton and Preuss (2008) have identified various characteristics of legacy, including tangible aspects like urban planning and sports infrastructure, as well as less tangible aspects like urban revival, international reputation, tourism, public welfare, employment, and cultural valorisation. However, negative legacies include debts from construction, high opportunity costs, infrastructure that is no longer needed, temporary crowding, and loss of tourists. Additionally, property rental increases and socially unjust displacement and redistribution are part of the negative legacies associated with MSEs (Gratton & Preuss, 2008).

Physical legacies are created during the infrastructure implementation process as well as how stadiums and other buildings are used after their MSE. Because MSEs are large-scale, one-time events, host cities must plan for any new sports infrastructure to be effectively used after the games (Gleason, 2023). The physical legacies of MSEs in host nations have drawbacks, such as the setbacks, delays, and asset misappropriation during the 2014 and 2016 FIFA World Cup and Summer Olympic Games in Rio de Janeiro, leading to debt and local criticism (Kirby & Crabb, 2019; Nunkoo et al., 2018). Planning the use of sports facilities post-MSEs can significantly impact their physical legacies, as seen in the case of stadiums in Athens, Sydney, and Seoul, which were built too large to meet demand and failed to secure contracts (Gleason, 2023). Cities with established sporting legacies, however, have been able to better leverage their stadiums in the future. This is exemplified by Germany's new stadiums after the 2006 FIFA World Cup and Los Angeles' existing stadiums and sports entertainment legacy after hosting the 1984 Summer Olympics, allowing cities to better leverage their stadiums and legacies (Kassens Noor, 2020; Minter, 2017; Gleason, 2023).

Intangible impacts like public support and global image creation can significantly influence a host city's legacy, making planning for these effects challenging. Some cities, fearing negative social and political legacies, may recoup bids based on negative public perceptions, as seen in Boston's 2024 Olympic bid (Kassens-Noor & Lauermann 2017). This approach highlights the importance of considering these factors when planning an MSE.

Los Angeles, the 1984 Summer Olympics host city, is known for its sustainability, economic conservatism, and sociocultural considerations.. It utilised existing infrastructure to create an athlete-experience-focused legacy, generating an uncommon profit and resulting in one of the most successful Olympic Games legacies. However, volatile public opinion and government actions in host nations like South Africa, Brazil, and Russia have made it difficult to maintain a positive legacy due to human rights violations and corruption (Nunkoo et al., 2018; Beissel and Kohe, 2022). The 2026 North American FIFA World Cup has also faced scrutiny for its symbolic legacy plans and political leaders' policies (Beissel & Kohe, 2022).

MSE legacies are constantly evolving issues that require intense monitoring and coordination from all stakeholders. These legacies can lead to uncomfortable knowledge, challenge underlying belief systems, and potentially posing a danger to those who want to preserve the dominant view (Stewart & Rayner, 2016). The complex nature of creating positive MSE legacies can be insurmountable, making it difficult to justify hosting such events under most circumstances (Gleason, 2023).

Sustainability

Among the primary recommendations in the IOC's 2020 Olympic agenda is "sustainability in all aspects of the Olympic Games" (Schnitzer & Haizinger 2019; Müller et al. 2021). The FIFA World Cup Bid Committee, too, has incorporated a long list of sustainability provisions into its bidding process, which has been bolstered by assessments of bidders' environmental impacts of hosting the games (Fermeglia, 2017).

MSEs have significant environmental impacts due to overuse of construction materials, energy, resources, waste generation, as well as air and noise pollution. This is primarily due to the overuse of electricity for infrastructure development, increased greenhouse gas emissions from traffic and tourism, and rising construction waste production (Fermeglia, 2017). Therefore, environmental strategies for these events have become an essential component of long-term planning. These strategies aim to reduce the environmental impact of event planning and staging (Mirzayeva et al., 2020).

Several potential solutions have been proposed by economists to improve the long-term operation and sustainability of MSE-related infrastructure during and after the events. They advocate for limiting the size of MSEs in order to reduce the need for large numbers, therefore reducing the scale of stadiums and infrastructure projects (Müller, 2015; Müller et al., 2021). Event organisers, on the other hand, are concerned that this will limit event revenue. Repurposing existing infrastructure or building long-term, multi-purpose facilities are two other options. Los Angeles saved millions of dollars by using existing stadiums for the 1984 Summer Olympics (Kassens Noor, 2020), and the 2026 North American FIFA World Cup won its bid by suggesting that host nations use existing stadiums (Beissel & Kohe, 2022).

Some host cities, however, simply lack the necessary sports infrastructure to host an MSE. If these cities insist on hosting and building stadiums, a number of options and solutions must be considered. For example, before submitting bids, infrastructure should be planned ahead of time and evaluated for feasibility (Müller 2015). Significant government planning and frameworks for post-MSE utilisation are required for sustainable stadium development legacies.

In summary, this section provided a detailed examination of MSEs, their characteristics, lifecycle, and multi-dimensional impacts on host nations. It highlighted the potential of MSEs to drive economic growth, social development, and urban transformation, while also acknowledging the challenges and risks associated

with hosting such large-scale events. The significant impacts of MSEs on host nations, especially in the economic realm, point to their potential to shape entrepreneurial activity. The next section directly examines this impact of MSEs on EEs.

3.3. Impact of MSEs on EE: A sport entrepreneurship perspective

This section explores the potential impact of MSEs on EEs from a sport entrepreneurship perspective. It begins by acknowledging the current lack of academic focus on this area and highlights the need for further research. The section then discusses how MSEs can create entrepreneurial opportunities across multiple industries and examines the arguments for and against the notion that MSEs can positively impact local entrepreneurship. It also addresses the challenges and barriers that EEs may face in leveraging these opportunities and the role of sport entrepreneurship in this context.

Since MSEs involve significant spending and investment, it is likely that such events would impact local entrepreneurship in the hosting nation (Wolfe & Shepherd, 2015). A review of extant literature reveals that this is one area that still lacks adequate academic focus and, thus, there remains significant scope for further research on the nature of the relationship between MSEs and entrepreneurship in a host nation (Briedenhann, 2011; Vico et al., 2019).

Some authors argue that MSEs can positively impact the economy and entrepreneurship because of their impact across multiple industries, such as tourism, construction, hospitality, etc. For example, according to Glynn (2008), a mega event can act as a jolt, “which opens up interstitial spaces in fields that allow entrepreneurs of “place” to enact change. For instance, city-building entrepreneurs connect their agenda of urban development to existing interests and networks within a community” (Glynn, 2008). The author goes on to add that “these entrepreneurs succeed to the extent that they can build connections among community actors, cobbling together

a “growth coalition” to simultaneously advance city interests as well as their own” (Glynn, 2008). Feddersen and Maennig (2013) have reported the positive economic effect of the 1996 Olympic Games on different macroeconomic sectors such as amusement, fine art, retail businesses, hotels, rentals, food and beverage industry, etc.

Although some studies strongly favour the notion that MSEs can create a positive impact on local entrepreneurship (Wolfe & Shepherd, 2015), there is a lack of conclusive evidence of actual benefit, and few empirical studies measure such impact. Furthermore, there are other studies that suggest that the MSEs can generate little or almost no economic impact on the host nations (Groothuis & Rotthoff, 2016). For example, based on a study of the 2010 FIFA World Cup in South Africa, Briedenhann (2011) concluded that event-related economic opportunities usually benefit those who are already economically secure, while those in distress continue to suffer.

Measuring the economic impact of MSEs is a complex process, and can produce inconclusive evidence. For example, the assessment would not only be affected by the type of conditioning economic models chosen, but also by the variables chosen within the models for a set of growth determinants for analysis (Sterken, 2006). Moreover, several other factors need to be considered, e.g., tourists who would have visited the host nation even if there was no event, expenditures that would have occurred without the event, etc.

MSEs are reported to have a positive impact on the trade deficits of host nations (i.e., total exports minus total imports) (Hayduk, 2019). However, a review of extant literature reveals a lack of academic interest in ascertaining the short- and long-term impact of MSEs on the trade deficit of host nations. The lack of conclusive evidence presents scope for further academic research to determine the actual impact of MSEs on local EE in the host nations after the award, prior to and during the event, and as part of the event’s legacy.

One of the most strategically relevant aspects of growth and development in the 21st century is the relationship between the hosting of MSE and trade (Love & Ganotakis, 2013; Fagerberg et al., 2007; Khelifa & Belcace, 2016; Lall, 2020; Hayduk, 2020). These aspects have been discussed in detail in the section 'Hypotheses', later on in the chapter. Lertwachara et al. (2021) have examined the effects of hosting MSEs on inward foreign direct investment (FDI) in nations that served as hosts to the Olympic Games, FIFA World Cup, the Union of European Football Associations Championship, and the Asian Games between 1960 and 2018. They reported that the host nations experienced beneficial effects and increased FDI inflows between announcements and the commencement of the events, hence contributing to growth in EE.

Since MSEs can encourage local and regional economic development (Taha & Allan, 2020), the decision to host an MSE is popular among both developing and developed countries, which are often competing to host such events (Rojas-Méndez et al., 2019). However, it is often argued that compared to developed economies, developing nations would require larger investments to meet the infrastructural requirements of MSEs and "have a higher opportunity cost of capital (i.e., capital that could be put to more beneficial uses)" (Hayduk, 2019). Furthermore, researchers highlight that investors are less keen on investing in developing economies owing to higher levels of risk and uncertainty compared to developed countries (Hayduk, 2019).

In their pursuit of opportunities, entrepreneurs need to overcome several barriers. Zupic et al. (2017) argue that barriers can exist at the level of an ecosystem and the individual firms within the ecosystem. The challenges that EEs may face include cultural, social, and material attributes (Zupic et al., 2017). Cultural challenge includes include the culture prevailing within the EE, which influences people in terms of their decision to work in salaried employment or choose entrepreneurship, and their decisions to take risks and borrow to invest in ventures, in terms of the levels of ambition of an entrepreneur, etc. (Zupic et al., 2017). Secondly, social

barriers include a lack of networking between different actors and elements within the EE, a lack of an appropriately skilled workforce, etc. Third, material challenges include unfavourable policy and governance, a lack of support services and facilities, and a lack of open markets that present opportunities for expansion (Zupic et al., 2017). Furthermore, at the firm level, additional barriers may include a lack of human capital, limited growth ambitions, limited knowledge of growth management, and the inability to achieve product-market fit (Zupic et al., 2017).

Fear of failure is yet another critical challenge among potential entrepreneurs, and this, in turn, forms a significant barrier to new and further entrepreneurial activities in the future. This is highest among first-time entrepreneurs (Dutta & Sobel, 2021) and can be a critical challenge for leveraging the entrepreneurial opportunities created during an MSE. Interestingly, it is observed that despite the fear of failure in entrepreneurship, people enjoying higher economic freedom choose to become entrepreneurs. This is possibly due to the fact that greater economic freedom provides “more alternative chances to redeploy and recoup investments in entrepreneurial expertise and capital” (Dutta & Sobel, 2021), should business ventures fail.

While the barriers identified above are usually common across the EE in developed and developing nations, the magnitude of such barriers differs. For example, compared to EE in developed nations, ecosystems in developing countries exhibit more constraints in their regulatory frameworks, offer limited access to finance, have greater barriers to the creation and flow of knowledge, lack a skilled workforce and entrepreneurial capabilities, and have a greater fear of failure (Cao & Shi, 2020). Researchers have identified several key limitations in economies, such as “underdeveloped institutions, unclear and inconsistent government policies, inadequate governance, disjointed infrastructure, limited funding options, inhibiting culture, personalised networks, an ill-funded and ambivalent educational system, and reluctant internationalisation.” (Cao & Shi, 2020). Expectedly, the presence of barriers and constraints lowers the efficiency of the EE to leverage entrepreneurial

opportunities. Nations compete to host MSEs for their associated benefits, including the increased scope for entrepreneurship (Glynn, 2008). Since the EE supports and fosters entrepreneurial activities, it will be in the hosting nation's interest to remove these barriers to maximise entrepreneurial outcomes.

Although it is difficult to assume that the removal of ecosystem-level and firm-level barriers will lead to an increase in the number of start-up ventures, each element of the barriers, such as access to finance, a skilled workforce, networking, policy and governance, as well as support systems, are essential prerequisites for entrepreneurship to thrive and grow. For entrepreneurial growth, there are other factors that are also involved, such as a competitive environment, and sound business strategies, etc. (Zupic et al., 2017). Elimination of the above-mentioned bottlenecks is a daunting task, and governments are expected to play a key role through the implementation of strategies and effective policymaking. Some of the barriers that can be alleviated through effective policies and governance include lack of investment, human capital, markets (Zupic et al., 2017), poor entrepreneurial aspirations, limited knowledge of growth management, and the inability to achieve product-market fit. Furthermore, strengthening the EE network after the MSE award is likely to help overcome other ecosystem barriers such as limited diffusion of knowledge and resources among different actors and stakeholders, lack of support services and facilities, and the lack of an appropriately skilled workforce, etc.

The configuration of the ecosystem is another aspect that needs to be considered by policymakers while preparing to host an MSE. Ratten (2019) focused on sports entrepreneurship to understand decisions on public policy. Her study emphasises that in order to effectively implement sport policy in society, both sports entrepreneurs and policy entrepreneurs need to be equally involved in decisions. Sports can be made attractive to entrepreneurship by adopting public policy initiatives such as partnerships between new public and private bodies and the use of consumer-driven initiatives (Ratten, 2019). While "self-employment can improve the resilience of an economy and its flexibility, innovation-driven and productive

entrepreneurship are important for job creation, increasing competitiveness, and, eventually, economic development” (Wurth et al., 2022). This emphasises the need for effective entrepreneurial policies at the local, regional, and national levels.

Sport entrepreneurship combines sport management with innovative behaviour (Ratten, 2012; 2021). Sport entrepreneurship is an evolving field and comprises a number of sub-categories, such as social, technological, and international entrepreneurship (Ratten, 2011). It encourages the development of crisis management techniques, leading to value co-creation and enhanced sports entrepreneurial capabilities (Ratten et al., 2021).

Furthermore, an MSE is often viewed as a source of immense entrepreneurial opportunities (Glynn, 2008). Since entrepreneurial opportunities are viewed as focal points for new venture creation, EE should include a support system “for the early phases of new venture creation, where scattered ideas evolve into venture concepts as tokens, frames, and premises for further action” (Nair et al., 2020). Intentions, resources, and capabilities are key requisites of venture creation, and the EE should support such requirements. In fact, “openness, self-selection, visibility, and connectivity” (Nair et al., 2020) are some of the proposed features of support systems that can be provided through an EE.

The section argues that MSEs can serve as catalysts for entrepreneurial activity by attracting investments, creating demand for goods and services, and fostering a culture of innovation and risk-taking. It also highlights the potential of MSEs to enhance the global visibility and reputation of host cities and countries, which can further boost entrepreneurial opportunities. However, the section also acknowledges the challenges and limitations associated with leveraging MSEs for entrepreneurial growth, such as the short-term nature of event-related opportunities and the potential for uneven distribution of benefits. The section concludes by emphasizing the need for a strategic approach to leveraging MSEs for entrepreneurial growth, one that takes into account the unique characteristics and challenges of EEs in different

contexts. It also highlights the role of sport entrepreneurship as a key driver of entrepreneurial activity in the context of MSEs, and the potential for MSEs to create lasting legacies that support the development of strong and sustainable EEs. In summary, this section examined the potential impact of MSEs on EEs from a sport entrepreneurship perspective, highlighting the opportunities and challenges associated with leveraging MSEs for entrepreneurial growth. It provided a nuanced analysis of the complex relationship between MSEs and EEs and emphasized the need for further research and strategic approaches to maximizing the entrepreneurial benefits of hosting MSEs. The specific impacts of MSEs on various aspects of EEs are captured through the formal hypotheses developed in the next section.

In light of the literature reviewed, this study aims to delve deeper into the specific ways in which MSEs influence EEs in host regions. While prior research acknowledges MSEs as potential catalysts for entrepreneurial activity, there remains a notable gap in understanding how these events directly shape EE dynamics and growth. This study addresses this gap by examining not only the direct impacts of MSEs on EEs but also how contextual factors—such as MSE popularity, economic development status, and rule of law—moderate this relationship. Through this focused approach, this research contributes a critical perspective to the discourse, offering empirical insights into how MSEs might sustainably enhance EEs across varied host environments.

3.4. Hypotheses

This section presents this study's hypotheses on the impact of MSEs on various aspects of the host nation's EE. It begins with hypothesis 1, which proposes that hosting MSEs enhances the quality of EEs in host nations post-award, compared to non-host nations. The rationale for this hypothesis is based on the potential of MSEs to attract investments, create demand for goods and services, and foster cultural innovation and risk-taking, which are critical drivers of entrepreneurial activity.

Furthermore, to understand the contextual conditions of the proposed relationship between MSEs and EE (H1), this study will examine three moderating hypotheses to investigate the role of MSE popularity (H2), economic development status (H3), and rule of law (H4). These hypotheses are based on the social capital theory which posits that strong institutional frameworks and extensive social networks enhance resource accessibility and entrepreneurial opportunities, thereby supporting entrepreneurial success (Machalek & Martin, 2015). Prior studies suggest that more popular events attract greater investments and generate stronger network ties, enhancing entrepreneurial resource flows (Gratton et al., 2000; Müller, 2015; Kim et al., 2006; Ritchie, 1984; among others). Similarly, economically developed host countries typically have more established infrastructures and institutions, increasing their ability to leverage resources effectively (Cornelissen, 2008; Maennig & Zimbalist, 2012; Medina-Smith, 2001; among others). Additionally, a robust rule of law contributes to institutional stability, ensuring transparent governance and reducing risks for entrepreneurs, thus fostering a more vibrant entrepreneurial ecosystem (Salinas, Ortiz, & Muffatto, 2019; Hartog, Stel, & Storey, 2010; and Elert, Henrekson, & Sanders, 2019; among others). These theoretical assumptions and empirical findings underpin the study's expectations regarding the moderating roles of event popularity, economic development, and rule of law.

The following table provides a summary of the four hypotheses, the overarching argument backing them based on the literature review, and an indication of whether the hypothesis is supported or not (to be determined based on the analysis):

Table 6: Hypotheses

No.	Hypothesis	Argument	Supported?
H1	The impact of MSEs on EE is greater in hosting countries than in bidding countries after the award date.	MSEs attract investments, global attention, and resources that can foster entrepreneurship, innovation, and economic growth, contributing to a stronger EE.	Yes

No.	Hypothesis	Argument	Supported?
H2	The impact of MSEs on EE is contingent on the popularity of MSEs, with more popular MSEs exerting a stronger influence.	Popular MSEs (e.g., Olympics, FIFA World Cup) have a more significant global reach, media exposure, and economic impact, amplifying the positive effects on the EE compared to non-popular MSEs.	Yes
H3	The impact of MSEs on EE is more pronounced in developed hosting countries compared to less developed ones	Developed nations often have advantages like better infrastructure, access to capital, skilled workforce, and stable institutions, which can enhance their ability to leverage the benefits of hosting MSEs for strengthening their EEs.	Yes
H4	The impact of MSEs on EE is greater in hosting countries with a stronger rule of law compared those with weaker institutional frameworks	A strong rule of law, characterized by effective legal systems, property rights protection, and contract enforcement, can amplify the positive impact of hosting MSEs on the EE by providing a more stable and supportive environment for entrepreneurial activities.	Yes

3.4.1. H1: The impact of hosting MSE on the GEI of host nations

The impact of hosting MSE on the EE quality- as measured by GEI index- of host nation is positive compared to non-hosting countries. The positive impact of MSE is attributed to improvements in tourism, employment, infrastructure, innovation, and local communities.

For example, in terms of tourism, MSEs are known to drive millions of visitors to flock to the host destination. The host cities often use MSEs as platforms to leverage themselves as tourist destinations (Jago et al., 2010). This influx of tourists creates

opportunities for entrepreneurs in the hospitality, transportation, and service industries. The increased demand for accommodation, dining, and entertainment services can stimulate entrepreneurial activity. For example, the 2012 London Olympics witnessed a 5.1% increase in tourism, with over 590,000 additional visitors, leading to the creation of numerous small businesses and jobs (Blake, 2005). Business activity in the host region can significantly increase due to tourism. Besides, MSEs also help cities garner media attention for future tourism. Müller (2015) has referred to the tourism effects of MSEs as one of the most prominent and greatest overpromises and opportunity costs of economic benefit.

MSEs can also positively affect host nations' EE through job creation. The hosting of MSEs creates a significant number of new jobs to both prepare for and run the event (Gleason, 2023). Greater job creation indicates a favourable environment for entrepreneurship, leading to increased job creation, economic growth, and overall employment rates. This is achieved through the establishment of new businesses, startups, and innovative ventures. The development and building of infrastructure such as housing, stadiums, and venues for events generates significant employment (Jago et al., 2010). This helps in responding to short-term economic needs and poverty alleviation, and leads to an increase in the skillset of the workforce in the host nation. Direct employment includes roles in event organization, security, and hospitality, while indirect employment encompasses sectors like construction, retail, and manufacturing. For instance, the 2010 FIFA World Cup in South Africa created an estimated 415,000 jobs, with a significant portion in the tourism and service sectors (Maharaj, 2011). However, the effects of MSE-related employment on the EEs of host nations can be short-lived and temporary (Baade & Matheson, 2016). After the hosting of MSEs, the need for new buildings and event-related vendors fades. This leads to unemployment and renders many unskilled labourers jobless. Therefore, it is difficult to justify how the hosting of MSEs affects employment and to what extent it impacts the EE of the host nation (Gleason, 2023; Li & Jago, 2013).

The development of infrastructure is another channel through which MSEs can positively affect EE in the host nations. Huge capital investment from MSEs is funnelled into projects for the redevelopment of transportation, hotel, and sports infrastructure. These more robust infrastructures support entrepreneurial ventures, improving connectivity, logistics, and market access, which consequently improves host country's entrepreneurial ecosystem. These infrastructure developments not only facilitate the smooth operation of the event but also create long-term benefits for the local EE. Improved transportation can enhance market accessibility, while new facilities can serve as incubators or co-working spaces for entrepreneurs. For example, the 2014 FIFA World Cup in Brazil generated investments of over \$11 billion in infrastructure projects, including airports, roads, and public transportation systems (Gaffney, 2014).

This hypothesis posits that hosting MSEs will positively impact the GEI in host nations, based on several channels of influence such as tourism influx, employment opportunities, infrastructure development, and heightened media attention. While studies have demonstrated MSEs' ability to drive entrepreneurial activity through tourism and infrastructure (e.g., Jago et al., 2010; Blake, 2005; Maharaj, 2011), some scholars question the long-term benefits and highlight potential for uneven economic outcomes (Müller, 2015; Baade & Matheson, 2016). This study hypothesizes that these cumulative effects will lead to statistically significant increases in GEI for host countries post-award, in contrast to non-host nations.

In summary, as previously discussed, MSEs is likely to enhance the EE quality in host nations due to the boost in tourism, employment, infrastructure, and socio-economic benefits accruing to local communities. The influx of visitors, infrastructure development, and job creation can stimulate entrepreneurial activities, foster an entrepreneurial culture, and contribute to factors such as human capital, risk acceptance, and market accessibility, which are essential components of a thriving EE. Furthermore, MSE-related entrepreneurial opportunities could positively influence entrepreneurial personalities and attributes such as entrepreneurial

attitudes, abilities, and aspirations among the residents in the host cities and countries. As a result, the entrepreneurial opportunities created by an MSE are expected to improve the quality of the EE in host nations.

Based on the rationales described above, the preceding argument thus suggests the following hypothesis:

Hypothesis 1: The impact of MSEs on EE is greater in hosting countries than in bidding countries after the award date.

3.4.2. Moderators (H2 – H4)

The three other hypotheses are formulated as follows.

H2: The moderating effect of MSEs popularity

More popular MSEs, such as the Olympics or FIFA World Cup, often exert a stronger influence due to their large audiences, international visibility, and significant infrastructure investments, all of which amplify economic and social impacts (Müller, 2015). These events not only attract diverse spectators and significant media attention but also mobilize substantial capital, fostering a conducive environment for entrepreneurial activity. By contrast, less popular MSEs generally have a more limited economic footprint, attracting smaller audiences and investments. This suggests that more popular MSEs will have a more substantial, positive impact on the EE of the host nation, enhancing elements such as investment accumulation, infrastructure, and market connectivity.

First, the impact of MSEs on EEs for more popular games can occur through the channel of infrastructure development. Specifically, popular MSEs, such as the Olympics or the FIFA World Cup, attract more investment and capital accumulation than the less popular ones. This abundant accumulated capital is an excellent source of support for urban development in the host country. As the literature describes, host nations, through governing bodies such as IOC and FIFA, strategically harness

mega-events for urban transformation by leveraging funds to create long-lasting transformative impacts (Grix, 2013; Hiller, 2000a; Smith, 2012; Müller, 2015), such as transportation networks, stadiums, and accommodation facilities (Gaffney, 2014). This development of facilities creates a long-term impact on the nation and provides facilities for the entrepreneur ecosystem to grow further. Eventually, more investments and capital accumulation provide entrepreneurs with better financial opportunities to develop their businesses.

Second, the more significant impact of MSEs on EEs for more popular games can also happen through the channel of media attention. Specifically, global media coverage contributes to the rise of this high investment. That is, more popular MSEs receive more extensive global media coverage and exposure, which can significantly enhance the host nation's visibility and reputation (Cornelissen, 2008) and attract more investment. Through media channel, popular MSEs also have the potential to foster a strong entrepreneurial culture and mindset within the host nation (Alvarez, 2004). That is, more popular MSEs incorporate more participants and diversity compared to the less popular sporting events. This diversity factor can improve products and services portfolio in the segments or markets of hosting countries and thus improve the entrepreneurial ecosystem. Schäfer and Brenning (2024) and Karlsson, Rickardsson, and Wincent (2019) demonstrate that diversity is an essential element in creating the entrepreneurial ecosystem.

The factors above (more capital, global media coverage, and facilities) are essential elements for entrepreneurs to develop their ecosystem. That is, infrastructures support entrepreneurs' ecosystems by providing physical access for them to grow, while media coverage supports the ecosystem by expanding networks and providing attention for entrepreneurs' businesses. In summary, for these reasons, this study predicts that the greater the value of urban transformation, infrastructure, investment accumulation, and the more diversified market that more popular MSEs can provide, the greater the magnitude of the

positive impact that MSEs can impose on the entrepreneurial ecosystem of the hosting countries.

Based on the rationales as described above, the study presents the second hypothesis as follows:

Hypothesis 2: The impact of MSEs on EE is contingent on the popularity of MSEs, with more popular MSEs exerting a stronger influence.

H3: The moderating role of host nations' economic development

MSEs hosted in developed countries have a more substantial impact on their entrepreneurial ecosystem compared to those hosted in less developed countries. The literature suggests that developed nations possess certain advantages that can amplify the positive impact of MSEs on their EEs compared to developing nations. For example, first, in terms of existing infrastructure and resources, developed nations typically have a more advanced and robust infrastructure, including transportation networks, telecommunications, and event facilities (Cornelissen, 2008). Second, developed nations generally have more established financial systems, deeper capital markets, and greater access to funding sources (Maennig & Zimbalist, 2012). Third, developed nations generally have more stable economic and political environments, which can provide a conducive climate for hosting MSEs and foster entrepreneurial activities (Hayduk, 2020). Fourth, developed countries also typically benefit from a more skilled and educated workforce, which can be mobilized to capitalize on the entrepreneurial opportunities presented by hosting MSEs. Fifth, developed nations often have well-established institutional frameworks, including legal systems, regulatory bodies, and government agencies (Medina-Smith, 2001). Thus, the positive impact of hosting MSEs on EE in developed nations is stronger than that in developing nations because hosting MSEs in the later possesses significant risks. One of the challenges of hosting MSEs in developing nations is the high cost needed than in developed nations. For example, South Korea spent \$2 billion to host the 2002 FIFA World Cup, while the United States spent less

than \$30 million for the 1994 FIFA World Cup (Matheson & Baade, 2005). Brazil's 2016 Summer Olympics cost over \$20 billion, with Rio alone contributing \$13 billion (McBride & Manno, 2021). These countries also face higher opportunity costs for capital, as the extensive expenses associated with infrastructural development often draw criticism from local communities who believe the money could be used for essential public projects and welfare schemes. For example, the Nigerian government spent \$330 million on a new soccer stadium, exceeding the national annual health and education budget ("Lecture delivered during Seminar on Olympics, OlympAfrica and Olympism. Organized by the Egyptian Olympic Committee and the National Sport Council. Cairo (Farah, 2001, as cited in Matheson & Baade, 2005").

As a result, the facilities built to cater to the demands of MSEs in developing nations in the aftermath of MSEs often remain underutilized and rarely draw significant crowds (Matheson & Baade, 2005). Developing economies fail to attract a considerable number of spectators and tourists, as local residents hesitate to pay for expensive tickets and foreign visitors harbour reservations due to concerns about crime, infrastructure, and accommodation quality (Matheson & Baade, 2005; Hayduk, 2019). Additionally, investors are more reluctant to invest in developing countries due to higher risks and uncertainty. Studies on foreign investment have shown that shareholders are less likely to view these investments favourably, leading foreign companies to be less likely to give risk capital (foreign equity investments) to companies in these countries (Berry 2006; Hayduk, 2019). Therefore, while underdeveloped nations have advantages in hosting MSEs due to low wages, infrastructure improvements, and a large pool of jobless or underemployed labour, the challenges and opportunities associated with hosting MSEs there are still significant.

In summary, the inherent advantages developed nations possess, such as existing infrastructure, access to capital, skilled workforce, economic stability, and established institutional frameworks, can amplify the positive impact of hosting MSEs

on the quality of their entrepreneurial ecosystems. Conversely, underdeveloped nations may face greater challenges in leveraging the potential benefits of hosting MSEs due to resource constraints, infrastructure deficiencies, and institutional weaknesses. This results in a weaker relationship between MSEs and the enhancement of their EEs. Based on the above arguments, this study formulates the third hypothesis as follows:

Hypothesis 3: The impact of MSEs on EE is more pronounced in developed hosting countries compared to less developed ones.

H4: The moderating role of the rule of law

Rule of law is one of the significant factors driving entrepreneurship (Agostino, Nifo, Trivieri, & Vecchione, 2019). Rule of law refers to the principle that all individuals, institutions, and entities, including the state itself, are accountable to laws that are publicly promulgated, equally enforced, and independently adjudicated. The rule of law, according to Valcke (2012), is a concept that describes the supreme authority of the law over governmental action and individual behaviour. It is analogous to a situation in which both the government and individuals are bound by the law and follow it. For some, the concept has a purely formal meaning, in which the state is required to act in accordance with the laws it has formulated, and these laws must meet a set of minimum requirements. Others, however, see the concept as having a broader, more substantive meaning that includes ideals of justice and fairness, as well as respect for fundamental rights. In this study, I focus on the formal meaning or specific concepts where the rule of law refers to a measure of how much people and businesses trust and follow the rules of society, which the World Bank also defines.

This study argues that the impact of MSEs on EE is more substantial in countries with a stronger rule of law. The greater impact of MSEs on EE in countries with stronger rule of law can occur through multiple channels. First, in terms of tourism influx channels, countries with stronger rule of law offer better security and peace of

mind for tourists visiting and making transactions. This occurs because countries with stricter rules of law implement stricter and more comprehensive regulations that tourists perceive as fair. It also aligns with the "Cultural Support" pillar of the GEI, as entrepreneurs are more likely to operate in an environment where they perceive the system as fair and supportive. Consequently, a higher number of tourists visit provides greater consumption and profit potential, which incentivizes entrepreneurs to grow their businesses and, thus, the ecosystem.

Second, the impact of MSEs on EEs in countries with stronger rule of law can also occur through the channel of infrastructure development. Precisely, countries with a stronger rule of law provide more confidence for entrepreneurs as it indicates that the government can protect entrepreneur's ideas, innovations, and business interests (see for example, Salinas, Ortiz, & Muffatto (2019), Hartog, Stel, & Storey (2010), and Elert, Henrekson, & Sanders (2019), among others). Higher-quality legal contracts will follow higher confidence in the country. Countries with a stronger rule of law typically have more transparent governance systems and institutional accountability mechanisms (Fox, 2014). This transparency can foster trust in the legal and regulatory framework, reducing uncertainty and encouraging entrepreneurial activities. As a result, this circumstance can invite more investment to host countries and support more infrastructure development.

Compared to countries with a weaker rule of law, entrepreneurs are less likely to face challenges in enforcing contracts, resolving disputes, and protecting their investments. Second, a strong rule of law often coincides with a more stable and predictable regulatory environment, which can facilitate business operations and reduce administrative barriers for entrepreneurs (Salinas et al., 2019). A strong rule of law can amplify the positive impact of hosting MSEs on the EE by providing a more stable and supportive environment for entrepreneurial activities. The rationale for using the rule of law is because this indicator is an important determinant of foreign direct investment, presented in Zhang and Liu (2021) and El-Hosseny (2023). This stability and predictability can contribute to the "Risk Acceptance" pillar of the

GEI, as entrepreneurs can better assess and manage risks associated with their ventures.

In summary, in countries with stronger rule of law, the positive impact of hosting an MSE on the EE is likely to be amplified, as the legal and institutional foundations are better equipped to support entrepreneurial activities and capitalize on the opportunities presented by the event. In contrast, in countries with a weaker rule of law, the positive impact of hosting an MSE on the EE may be limited due to factors such as inadequate legal protection, weak contract enforcement, lack of transparency, and an unstable regulatory environment. Based on the rationales as described above, the fourth hypothesis is as follows:

Hypothesis 4: The impact of MSEs on EE is greater in hosting countries with a stronger rule of law compared those with weaker institutional frameworks .

In conclusion, this literature review provided a comprehensive overview of the key concepts, theories, and arguments relevant to understanding the relationship between MSEs and EEs. It examined the concept of EEs, their definitions, elements, measurement, and the factors that shape their development and outcomes. It also provided a detailed analysis of MSEs, their characteristics, lifecycle, and multi-dimensional impacts on host nations, and explored the potential impact of MSEs on EEs from a sport entrepreneurship perspective. Finally, it presented a baseline hypothesis that examines the impact of MSEs on EE quality in host countries. Then, it proposes a set of moderating hypotheses that looks at key institutional and event related factors (i.e. MSE popularity, host nations' economic development, and host nations' rule of law) that influence the relationship between MSEs and EE quality in host countries. The next section outlines the data and methodology used to test these hypotheses and advance our understanding of the complex relationship between MSEs and EEs.

4. QUANTITATIVE STUDY

This study employs a mixed methods approach to capitalize on the strengths of both quantitative and qualitative methodologies. Mixed methods allow for the reliability and generalizability of quantitative data, such as through difference-in-differences (DID) analysis, alongside the depth and subjective insights gained from qualitative data, including bid book reviews and interviews. This combination is particularly suitable for the current study, as it enables a comprehensive examination of the measurable impacts of mega sporting events (MSEs) on entrepreneurial ecosystems (EEs) while simultaneously exploring stakeholder perceptions and context-specific factors that may not emerge in purely quantitative analysis. Creswell (2014) underscores the value of mixed-methods research in social sciences, noting that it provides a more robust understanding of complex relationships by bridging empirical data with rich, in-depth responses. Therefore, a mixed-methods approach is the most effective way to capture the multifaceted relationship between MSEs and EEs, allowing this study to address both the ‘what’ and the ‘how’ and ‘why’ of MSE impacts across diverse host settings. Therefore, the method, measure, analysis and results of the quantitative and qualitative approach will be presented sequentially.

4.1. Quantitative data sources

To test the hypotheses and conduct empirical analyses, a comprehensive dataset was compiled from various reputable sources. The detailed data sources are provided in the following table.

Table 7: Quantitative Data Sources

Data	Sources
Mega-Sporting Event Data	Information on past MSEs, such as the Olympic Games and FIFA World Cup, was obtained from the respective organizing bodies (e.g., International Olympic Committee, FIFA). This data includes details on host nations, event years, and relevant event-specific metrics.
Entrepreneurial Ecosystem Indicators	Data on the pillars of the GEI and other relevant entrepreneurship indicators were collected from the Global

Data	Sources
Economic and Development Indicators	Entrepreneurship Monitor (GEM) and the World Bank's Entrepreneurship Survey and database.
Infrastructure Quality Indicators	Macroeconomic data, such as trade balances, foreign direct investment (FDI) inflows were sourced from databases maintained by the World Bank, and the International Monetary Fund (IMF).
Rule of Law and Governance Indicators	Measures of infrastructure quality, including transportation networks, utilities, and communication systems, were obtained from the World Economic Forum's Global Competitiveness Report and the World Bank's Logistics Performance Index.
Rule of Law and Governance Indicators	Data on the rule of law, property rights protection, and governance quality were collected from the World Bank's Worldwide Governance Indicators and the World Justice Project's Rule of Law Index.

4.2. Quantitative study measures

The measures used in this study are as follows:

1. Dependent variable: EE Quality is measured by the GEI score, released and calculated by Global Entrepreneurship and Development Institute (GEDI), and the individual pillar scores for each host nation. The GEI pillars include Opportunity Perception, Startup Skills, Risk Acceptance, Networking, Cultural Support, Opportunity Startup, Technology Absorption, Human Capital, Competition, Product Innovation, Process Innovation, High Growth, Internationalization, and Risk Capital.
2. Popularity of MSEs: This assessment is based on measures including global viewership, media coverage, and economic impact. Events like the Olympic Games and FIFA World Cup are considered popular MSEs due to their widespread global reach and cultural significance. Lertwachhara, Tongurai, and Boonchoo (2021) demonstrate that the impact of sporting event is dependent on the sporting type.

3. **Level of Economic Development:** The classification of developed and developing nations follows the IMF criterion of country's economic development. Today, France, Russia and South Korea are categorized as developed nations, while Brazil and Indonesia are categorized as developing economies. However, as per award year (and the event year), Russia was still classified as developing economy. Based on the IMF classification, Russia was categorized as high-income economy in 2023, while South Korea was classified as a developed country in 2001. Hence, in this hypothesis, the developed countries are France and South Korea, while Russia, Brazil and Indonesia are classified as developing countries.
4. **Rule of Law:** The study utilizes the Rule of Law Index to measure the rule of law. Rule of Law is measured by the World Bank's Worldwide Governance Indicators. The World Bank describes the rule of law (RoL) as the level of trust and compliance among individuals and businesses regarding societal rules. Additionally, it assesses the effectiveness of contract enforcement, property rights, law enforcement, and judicial systems, along with the prevalence of crime and violence. In this study, a country is classified as having a high rule of law in a given year if its Rule of Law index for that year is higher than the median of the index of all countries in the same year. By comparing the rule of law index among Russia, Brazil, France, Indonesia, and South Korea relative to the median of rule of law across all countries throughout 2006 – 2019, France and South Korea are identified as countries with higher rule of law, while Brazil, Indonesia and Russia have lower rule of law.

4.3. Quantitative data analysis

To guide empirical estimation and ensure internal validity, this study employs a quasi-experimental design combining Coarsened Exact Matching (CEM) with a Difference-in-Differences (DID) estimation strategy. This approach addresses

selection bias by preprocessing the sample to achieve covariate balance between treatment and control groups (host and non-host countries), followed by modelling the differential effect of hosting MSEs on EE outcomes over time. Table 8 presents a six-step roadmap summarizing the empirical strategy, from hypothesis framing to robustness testing and moderation analysis. This framework underpins the identification of causal effects and the testing of heterogeneous impacts across event popularity, institutional capacity, and country-level economic development.

Table 8: Empirical strategy: matching and causal inference framework

Step	Action	Purpose
1. Hypotheses framing	Define H1–H4 around treatment effects (e.g., hosting MSEs)	Guide causal estimation
2. Data assembly	Construct panel of host and non-host countries (2009–2018) using GEI and MSE databases	Ensure event/outcome temporality
3. Pre-treatment matching	Apply Coarsened Exact Matching (CEM) on control variables (e.g., GDP, region, prior GEI levels)	Reduce selection bias; create covariate balance
4. Outcome modeling	Use Difference-in-Differences (DID) regression on matched sample	Estimate treatment effect on EE quality
5. Heterogeneity analysis	Interact treatment with moderators: event popularity, economic development, rule of law	Test H2–H4 effect heterogeneity

4.3.1. Quantitative data sample construction

This study implements Coarsened Exact Matching (CEM) to select observations that are eligible for inclusion in the subsequent analysis. CEM is a method in the “Monotonic Imbalance Bounding” (MIB) class of matching methods (Iacus et al., 2012). It works with samples and requires no assumptions about the data generation process. This method ensures that the imbalance between matched treated and control groups is not greater than the ex-ante user choice, which is chosen based on specific, intuitive, substantive information. The basic idea behind CEM is to coarsen each variable by recoding it so that substantially indistinguishable values are grouped and assigned the same numerical value (groups can be the same size or different sizes depending on the problem). Matching is not a method of estimation; it is a way to preprocess a data set so that estimation based on the matched data set will be less model-dependent than when based on the original full dataset. Matching involves pruning observations that have no close matches on pre-treatment covariates in both the treated and control groups.

As a result, CEM assigns matching the task of eliminating all imbalances (differences between the treated and control groups) above a certain level defined by coarsening. All multivariate nonlinearities, interactions, moments, quantiles, comovements, and other distributional differences beyond the chosen level of coarsening are eliminated by CEM. As a result, the remaining differences are all within small, coarsened strata and are thus highly amenable to being spanned by a statistical model without risk of model dependence. CEM, like exact matching, generates strata of varying sizes. If this is not feasible and sufficient data are available, users can generate a one-to-one match by randomly selecting the desired number of treated and control units from those within each stratum, or they can use an existing method within strata (Iacus et al., 2012).

Before applying CEM, any variable with a high proportion of missing values was dropped to prevent severe data imbalance. Given that each hypothesis involves different pair of variables, I apply CEM to the set of variables under each hypothesis. Hence, each hypothesis is supported by the set of data that is essentially a subset

of its full dataset with a minimized degree of imbalance. The imbalance is measured as a score of multivariate L1 distance, which is measured between 0 and 1, where 0 refers to perfect balance and 1 refers to perfect imbalance. The aim of CEM is to reduce imbalance but at the same time I need to maintain the number of observations. The final deliverable from this step is the pre-processed dataset that is ready for DID analysis. The final data format is panel dataset with countries as a cross section and year as the time unit. Treatment year is the award year.

This study applied CEM using several covariates deemed important for investors when deciding to invest in a country. Based on a thorough literature review, these covariates were selected, including regulatory quality, FDI, intellectual property, and levels of corruption. The study avoided using covariates with significant missing values due to their potential to disrupt data balance. CEM was applied to the covariates to reduce the degree of imbalance. The imbalance is quantified as a score of multivariate L1 distance, ranging from 0 to 1, where 0 indicates perfect balance and 1 indicates perfect imbalance. The measures of univariate imbalance before and after applying CEM are presented in Tables 2 and 3. As shown in the tables, our analysis indicates that CEM can significantly reduce the imbalance from 0.668 to 0.345. The number of non-treated observations decreased from 159 to 72, while the number of treated observations dropped from 45 to 41. CEM was employed to create a balanced dataset by matching host and non-host countries on several covariates, enhancing the empirical findings. This approach, aligning with the recommendations of Iacus et al. (2012), ensured a more precise comparison and inference from the DID analysis. The descriptive statistics of treatment vs control group before and after CEM are provided in the Appendix 1.

4.3.2. Difference-in-Difference (DID)

In this study, dynamic Difference-in-difference (DID) regression is applied on all the hypotheses, not the canonical DID. The main reason for using dynamic DID is that different MSEs have different date of awards. I use year of award as the treatment

year, not the year of hosting. Since year of award of each country is varied, I cannot implement a conventional canonical DID regression in our case. Instead, a dynamic DID approach was implemented, incorporating a set of lag and lead dummy variables. A dynamic DID regression was used to estimate the effect of the treatment variable, hosting a mega sporting event, on the dependent variable, the quality of entrepreneurial ecosystems (EEs). In doing DID regression, only matched observations based on CEM following with GEI as the dependent variable and treatment as the independent variable were incorporated. Fixed effect of country and year and estimate the equation using clustered standard error was also added. More importantly, before applying DID regression, it was ensured that parallel trend assumption holds under each hypothesis. In doing this, parallel trend tests were run using diagram. Specifically, I compare the trend of GEI average between treated and control groups before the treatment year (i.e. the award year), as shown in Figure

parallel trend assumption holds when all estimated coefficients in lag dummy variables contain zero within their confidence interval.

DID is a commonly used method to assess the effect of any treatment. DID is one of the most widely used empirical research designs for estimating the effects of policy changes or interventions. The DID method's application varies depending on the nature of the study. DID estimators are frequently used in empirical economic research to assess the impact of public interventions and other treatments of interest in the absence of purely experimental data. The average effect of a treatment (such as participation in a vocational training programme) on some outcome variable of interest (such as earnings or employment) is the typical goal of evaluation studies.

DID estimation is becoming a more popular method for estimating causal relationships. DID estimation entails identifying a specific intervention or treatment (such as the passage of a law). The difference in outcomes before and after the intervention for groups affected by the intervention is then compared to the same difference for unaffected groups. In addition to the canonical DID method, which involves two groups (treatment and control) and two time periods (pre- and post-),

DID applications have considered more than two time periods as well as variations in treatment timing. The group-time average treatment, i.e., the average treatment effect of the treatment group at a specific time, is involved, and the group is defined based on the time period when its units were first treated (Callaway and Sant'Anna, 2021).

However, DID estimation has limitations as well. They are only appropriate when the interventions are as good as random, conditional on time, and have group-fixed effects. As a result, much of the debate over the validity of a DID estimate typically revolves around the possibility of intervention endogeneity (Bertrand et al., 2004).

The matched observations based on the CEM, using GEI as the Dependent Variable (DV) and treatment as the **Independent** Variable (IV), were included in the regression analysis, as explained in the subsequent section. Fixed effects of country and year have been added, and the equation has been estimated using clustered standard error. Years preceding the award year are represented by lag dummy variables for three to four years before the award, while years following the award year are represented by lead variables up to ten to eleven years after the award year. The base year of the model is the MSE award year.

3.3.3. Model Specification

Model specifications for the formulated hypotheses are presented as follows.

Hypothesis 1

In the first hypothesis, this study investigates whether hosting MSEs enhances the quality of EEs in host nations post-award, compared to non-host nations. The DID regression analysis began with examining the quality of EEs following the award of MSEs, focusing on GEI as the proxy of the entrepreneurial ecosystem. The year of treatment has been determined to be the year of award rather than the year of hosting. By setting the year of the award as the treatment year, this study incorporates the possibility that entrepreneurs started to increase their production

plan through deals and contracts in preparation for the upcoming event date. This study implements dynamic DID with lag and lead dummy variables because of multiple treatment events. Thus, a dynamic DID regression was used to determine whether hosting an MSE positively impacts host countries' EEs, as measured by the GEI. The model specification under this hypothesis is as follows:

$$GEI_{i,t} = \alpha + \sum_{k=1}^n \beta_k D_{i,t-k} + \sum_{l=1}^n \beta_l D_{i,t+l} + \delta_t + \gamma_i + \varepsilon_{i,t}$$

Where:

- $D_{i,t-k}$: A binary treatment if country i host MSE at k -periods before treatment (lag).
- $D_{i,t+l}$: A binary treatment if country i host MSE at l -periods after treatment (lead).
- β_k : ATT Coefficients for pre-treatment effects.
- β_l : ATT Coefficients for post-treatment effects.
- δ_t : Time fixed effects.
- γ_i : Unit fixed effects.
- $\varepsilon_{i,t}$: Error term

Hypothesis 2

In the second hypothesis, I examine whether the impact of hosting MSEs on the quality of EEs in host nations post-award is stronger for popular MSEs than non-popular MSEs. The prediction is that the popularity of the MSE will amplify the initial increase in EE quality because the event will create a new market that attracts people to participate in reaping profits. Two dynamic DID models were created to investigate this. The first model assumes that the treated countries host more popular MSEs, while the controlled countries are the bidders' country-year

observations in which no MSEs are hosted. The second model is one in which the treated countries are those that host less popular MSEs, while the controlled countries are the bidders' country-year observations in which no MSEs are hosted. The specification of models is provided below:

Model 1 specification:

$$GEI_{i,t} = \alpha + \sum_{k=1}^K \beta_k^{POP} D_{i,t-k}^{POP} + \sum_{l=1}^N \beta_l^{POP} D_{i,t+l}^{POP} + \delta_t + \gamma_i + \varepsilon_{i,t}$$

Where:

- $D_{i,t-k}^{POP}$: A binary treatment if country i hosts a popular MSE at k -periods before treatment
- $D_{i,t+l}^{POP}$: A binary treatment if country i hosts a popular MSE at l -periods after treatment
- β_k^{POP} : ATT Coefficient for pre-treatment effects in a country hosting a popular MSEs at k period before the treatment year
- β_l^{POP} : ATT Coefficient for post-treatment effects in a country hosting a popular MSEs at l period after the treatment year
- δ_t : Time fixed effects.
- γ_i : Unit fixed effects.
- $\varepsilon_{i,t}$: Error term

Model 2 specification:

$$GEI_{i,t} = \alpha + \sum_{k=1}^K \beta_k^{LESS} D_{i,t-k}^{LESS} + \sum_{l=1}^N \beta_l^{LESS} D_{i,t+l}^{LESS} + \delta_t + \gamma_i + \varepsilon_{i,t}$$

Where:

- $D_{i,t-k}^{LESS}$: A binary treatment if country i hosts a less popular MSE at k -periods before treatment
- $D_{i,t+l}^{LESS}$: A binary treatment if country i hosts a less popular MSE at l -periods after treatment

- β_k^{LESS} : ATT Coefficient for pre-treatment effects in country hosting a less popular MSEs at k period before the treatment year
- β_l^{LESS} : ATT Coefficient for post-treatment effects in country hosting a less popular MSEs at l period after the treatment year
- δ_t : Time fixed effects.
- γ_i : Unit fixed effects.
- $\varepsilon_{i,t}$: Error term

Hypothesis 3

This hypothesis investigates whether the impact of MSEs on EEs post-award is stronger for developed hosting nations compared to less developed nations. Thus, I hypothesize that hosting MSEs in developed countries has a greater positive impact on the quality of the EE post-award. Two dynamic DID models were created to investigate this. Model 1 is when the treated countries are developed hosting countries (France and South Korea), and the controlled countries are the bidders' country-year observations with no MSEs hosted. Model 2 is when the treated countries are developing hosting countries (Russia, Brazil, and Indonesia), and the controlled countries are the bidders' country-year observations with no MSEs hosted. However, to test this hypothesis, it is necessary to compare the maximum statistically significant ATT of model 1 compared to that of model 2. The hypothesis is confirmed when I find that the maximum ATT of model 1 is higher than that in model 2, which validates that the impact of MSE on EE's post-award in developed countries is more substantial than in less developed ones. The models specification are as follows:

Model 1 specification:

$$GEI_{i,t} = \alpha + \sum_{k=1}^K \beta_k^{ADV} D_{i,t-k}^{ADV} + \sum_{l=1}^N \beta_l^{ADV} D_{i,t+l}^{ADV} + \delta_t + \gamma_i + \varepsilon_{i,t}$$

Where:

- $D_{i,t-k}^{ADV}$: A binary treatment if advanced country i hosts a popular MSE at k -periods before treatment
- $D_{i,t+l}^{ADV}$: A binary treatment if advanced country i hosts a popular MSE at l -periods after treatment
- β_k^{ADV} : ATT Coefficient for pre-treatment effects in advanced countries hosting MSEs at k period before the treatment year
- β_l^{ADV} : ATT Coefficient for post-treatment effects in advanced countries hosting MSEs at l period after the treatment year
- δ_t : Time fixed effects.
- γ_i : Unit fixed effects.

Model 2 specification:

$$GEI_{i,t} = \alpha + \sum_{k=1}^K \beta_k^{DEV} D_{i,t-k}^{DEV} + \sum_{l=1}^N \beta_l^{DEV} D_{i,t+l}^{DEV} + \delta_t + \gamma_i + \varepsilon_{i,t}$$

Where:

- $D_{i,t-k}^{DEV}$: A binary treatment if developing country i hosts a less popular MSE at k -periods before treatment
- $D_{i,t+l}^{DEV}$: A binary treatment if developing country i hosts a less popular MSE at l -periods after treatment
- β_k^{DEV} : ATT coefficient for pre-treatment effects in developing country hosting a less popular MSEs at k period before the treatment year
- β_l^{DEV} : ATT coefficient for post-treatment effects in developing country hosting a less popular MSEs at l period after the treatment year
- δ_t : Time fixed effects.
- γ_i : Unit fixed effects.
- $\varepsilon_{i,t}$: Error term

Hypothesis 4

This hypothesis investigates whether the impact of MSEs on EEs in hosting countries with higher rule of law is greater than hosting the event in a country with a lower rule of law index. A dynamic DID regression with the GEI as the dependent variable is applied to answer this question. The IVs include lag and lead variables, with the award year as a reference year. Two models are created under this hypothesis. The first model utilizes the treated group of the hosting countries with a high rule of law, while the control group is bidding countries that failed to win the event project. On the other hand, the second model utilizes the treated group of the hosting countries with a low rule of law, while the control group is bidding countries. The models specification are as follows:

Model 1 specification:

$$GEI_{i,t} = \alpha + \sum_{k=1}^K \beta_k^{HIGH} D_{i,t-k}^{HIGH} + \sum_{l=1}^N \beta_l^{HIGH} D_{i,t+l}^{HIGH} + \delta_t + \gamma_i + \varepsilon_{i,t}$$

Where:

- $D_{i,t-k}^{HIGH}$: A binary treatment if a high rule of law country i hosts a popular MSE at k -periods before treatment
- $D_{i,t+l}^{HIGH}$: A binary treatment if a high rule of law country i hosts a popular MSE at l -periods after treatment
- β_k^{HIGH} : ATT Coefficient for pre-treatment effects in high rule of law countries hosting MSEs at k period before the treatment year
- β_l^{HIGH} : ATT Coefficient for post-treatment effects in high rule of law countries hosting MSEs at l period after the treatment year
- δ_t : Time fixed effects.
- γ_i : Unit fixed effects.
- $\varepsilon_{i,t}$: Error term

Model 2 specification:

$$GEI_{i,t} = \alpha + \sum_{k=1}^K \beta_k^{LOW} D_{i,t-k}^{LOW} + \sum_{l=1}^N \beta_l^{LOW} D_{i,t+l}^{LOW} + \delta_t + \gamma_i + \varepsilon_{i,t}$$

Where:

- $D_{i,t-k}^{LOW}$: A binary treatment if low rule of law country i hosts a less popular MSE at k-periods before treatment
- $D_{i,t+l}^{LOW}$: A binary treatment if low rule of law country i hosts a less popular MSE at l-periods after treatment
- β_k^{LOW} : ATT coefficient for pre-treatment effects in low rule of law country hosting a less popular MSEs at k period before the treatment year
- β_l^{LOW} : ATT coefficient for post-treatment effects in low rule of law country hosting a less popular MSEs at l period after the treatment year
- δ_t : Time fixed effects.
- γ_i : Unit fixed effects.
- $\varepsilon_{i,t}$: Error term

4.4. Quantitative study results

4.4.1. Summary Statistics

The summary statistics, presented in Table 1, provided a comprehensive overview of the key variables of interest. The variables in log form have been normalised to have zero at a minimum value, meaning no negative value exists in the original dataset.

4.4.2. Testing the Hypotheses: Results

Hypothesis 1: Main effect

The DID design validity assumes that the EE quality of awarded countries would have followed the bidding countries but not awarded. While, this couldn't be directly

assessed, this assumption would be supported if no evidence of difference in the EE quality trends is noticed between the bidding countries in the pre-award period. Figure 11 plots the five-year pre-award trajectories of the GEI for treated and control countries. Figure 4 shows whether the trend difference of GEI between treated and control countries is statistically different or not. In Figure 4, the x-axis represents the number of years since the award or prior to the award year (the red line), while the y-axis denotes the marginal change in the GEI index of the treatment group relative to the control group. In other words, the y-axis shows the average impact of the entrepreneurial ecosystem event on the treatment group compared to the control group following the award year. The red line indicates the award year, or $t = 0$. Thus, $(t-1)$ signifies one year before the event, while $(t+1)$ marks one year after the event, and so forth. Based on the staggered DID regression analysis, the results indicate no statistically significant difference in the entrepreneurial ecosystem (EE) between the treatment and control groups prior to the award year, which confirms parallel trend assumption. This conclusion is drawn since zeros are included within the confidence interval of the average treatment impact at $(t-5)$, $(t-4)$, $(t-3)$, $(t-2)$, and $(t-1)$. Similarly, post the award year, no statistically significant ATT is found up to period 9. However, the ATT is statistically significant ten years after the award. A more specific magnitude of the impact is illustrated in Table 12. The results in Table 12 represent the findings of the regression model testing hypothesis 1. Table 12 demonstrates that the impact of MSEs on EEs exhibits a statistical difference only in period $(t+10)$, but there is no significant difference between host countries and non-host countries within nine years after the award date.

Since the staggered dynamic regression produces no significant ATT in most the period, stepwise regression is further implemented to investigate the estimation in more detail. The stepwise regression result is provided in Table 13. As illustrated in the table, the estimation also demonstrates a significant ATT impact at six years after the award year. Precisely, the MSEs shows a significant impact on EEs in the hosting countries with the average GEI at 3.369 higher compared to that of the

bidders, although the p-value is 0.057, which means it is only significant at 90% confidence level. Nevertheless, this finding implies that MSEs give a positive impact on EEs within six years after the award, which confirms our first hypothesis. However, the impact becomes negative five years later at period (t+11) at -6.410. This ups and down indicates that the impact of MSEs on EE in hosting countries is dependent on some moderations, such as the MSE popularity, hosting country's economic development, or rule of law level of the hosting country, which will be discussed in the subsequent sections.

Hypothesis 2

Figure 5 depicts the DID Estimated Coefficient plot for more popular games, with GEI as the dependent variable, and Table 13 presents the detailed regression results. Similar to the previous hypothesis, the red line indicates the award year. As shown in Figure 5, the parallel trend assumption holds because most estimated coefficients before the award year fall within zero of their 95% confidence intervals. The treatment group in this hypothesis consists of countries hosting the event (i.e., those that won the bidding), while the control group comprises the bidding countries that failed to win the award.

As shown in Figure 5, the plot indicates that the average treatment impact of the event on GEI in countries hosting popular games tends to be consistently higher than that of bidders after the award. Specifically, the impact is statistically significant in the period (t+1) and increases up to (t+5). The impact then fade out from (t+6) to (t+9). The specific magnitude of the impact is detailed in Table 13. As shown in Table 13, the estimated coefficients are statistically significant from (t+1) at 5% significance level, while the coefficients at (t+2), (t+3), (t+3) and (t+4) are statistically significant at 10% significance level. From one to four years after the award, the highest estimated coefficient at 8.886 occurring four years after the award (t+4). These results indicate that more popular games tend to enhance the quality of the

entrepreneurial ecosystem post-award in hosting countries compared to the bidders (those who do not host MSEs).

Figure 6 illustrates the DID Estimated Coefficient plot for less popular games with GEI as the dependent variable, while Table 14 presents the detailed regression results. As seen in Figure 6, the parallel trend assumption holds since most estimated coefficients in the lag period include zero within their 95% confidence interval. The treatment group comprises countries hosting the less popular event, while the control group consists of countries that bid for the event but failed to secure it. The plot indicates that the average treatment effect of the event in the countries hosting less popular games is higher compared to those bidding for it, but this effect only materializes five years after the award and fade out thereafter. The significance level is also limited to 10%. The significant impact appears more slowly than in the case of more popular games, where the statistically significant impact arises much sooner, starting one year after the award and remaining evident even seven years later.

Specifically, as shown in Table 14, six years after the award ($t+5$), the estimated coefficient is statistically significant at 6.478, with a p-value of 0.051, which is significant at the 10% level. This finding suggests that less popular games also enhance the entrepreneurial quality of the hosting countries compared to the bidders after the award, but the effect is smaller and occurs more slowly than with more popular games. Specifically, the maximum impact of more popular MSEs on GEI is 8.886, whereas the maximum impact of less popular MSEs on GEI is 6.478. Therefore, the hypothesis is confirmed that more popular MSEs are likely to exert a greater positive influence on the quality of the entrepreneurial ecosystems of host countries after the award than less popular MSEs.

Hypothesis 3

CEM for each model is rerun, followed by dynamic DID regression. Figure 7 shows the average treatment on the treated group (ATT) of the event plot in developed countries relative to bidders, with detailed results in Table 15. On the other hand, Figure 8 shows the coefficient plot from the regression of model 2 (developing countries) with detailed results in Table 16. In running the dynamic DID, GEI has been used as the DV, while the IVs are lag and lead dummies representing years before and after the award date, respectively.

Figure 7's x-axis represents the number of years since the reference. The reference in the plot is award year, depicted by the red line. Accordingly, (t-1) denotes one year before the award year, (t-2) denotes two years before the award, while (t+1) denotes one year after the award, and so forth. On the other hand, the y-axis represents the average treatment impact of the MSE on EE in developed countries relative to the bidders and their 95% confidence interval. As illustrated in Figure 7, after the award year, the ATT becomes statistically positive within one year after the award, which implies that the impact of MSE on the EEs in developed hosting countries is more significant than the bidders. The ATT is statistically significant at 5% significance level. Furthermore, the impact remains positive and significant within two years after the award. However, the impact is no longer significant beyond two years after the award. Table 15 demonstrates the specific value of the ATT in Figure 7 as follows. As shown in Table 15, the average impact of the event on the treated group is 4.0604 within one year after the award year. Furthermore, the impact is 4.129 within two years after the award but it is only significant at 10% significance level. However, since the significant impact only lasts for two years, it indicates that the impact of MSEs on EEs in developed countries occurs only in the short run.

Figure 8's x-axis represents the number of years since the reference. The reference in the plot is award year, depicted by the red line. On the other hand, the y-axis represents the average treatment impact of the MSE on EE in developing countries relative to the bidders and their 95% confidence interval. As illustrated in Figure 8, the parallel trend assumption is valid because all estimated coefficients before the

award year contain zero within their confidence interval. However, the ATT does not instantly become positive after the award year. In fact, the ATT is found being statistically significant within six years after the award. The statistical significance is even persistent up to ten years after the award. According to Table 16, the p-values of all dummy variables after the award year are higher than 0.05 and 0.10. This finding indicates that MSEs hosted in developing countries have less magnitude compared to that of bidders (those who do not celebrate MSEs). Since the dynamic DID estimation provides no significant ATT, I implement stepwise regression, as presented in Table 16. As shown in the Table, the stepwise regression shows a statistically significant impact of MSEs on EEs at 5% significant level, but the sign is negative, which is at -6.089. This indicates that, not only being insignificant as presented in the staggered DID setting, but the impact of MSEs on EEs in developing countries may even less substantially compared to the bidders.

Based on the comparison of the two models above (model 1 and model 2), it can be noted that the maximum impact of MSEs on GEI held in developing countries is negative, which is less than that of MSEs held in developed countries at 4.060. Accordingly, the hypothesis 3 is supported. Hosting MSEs in developed countries is likely to impact the quality of the entrepreneurial ecosystem post-award more positively than in developing countries.

Hypothesis 4

Figure 9 shows the coefficient plot from the regression for awarded countries with high rule of law, while the detailed regression result is presented in Table 17. As shown in Figure 9, there is no statistically significant impact of the MSE between treated and control groups of countries before the award year since the confidence intervals of the estimated coefficients contain zero. This confirms the parallel trend assumption before the award year. Furthermore, the average impact of the MSE on

EE becomes higher and statistically significant one year after the award ($t+1$) in countries with a high rule of law relative to the bidders. The figure even shows that the impact remains significant at ($t+2$). However, the significant impact diminishes in three years after the award year and afterwards. Among the significant impacts, the most considerable magnitude occurs nine years after the award. Specifically, as shown in Table 17, the GEI of treated countries one year after the award is, on average, 7.035 higher than non-hosting countries, which is significant at 1% significance level, while the impact weakens in the second period to 6.902.

On the contrary, Figure 10 illustrates the GEI coefficient plot from the regression of hosting countries with low rule of law (Russia, Brazil, and Indonesia) relative to non-hosting countries. As shown in Figure 10, the parallel trend assumption in the estimation is confirmed, as all estimations of the ATT coefficient before the award year contain zero in their confidence interval. However, the estimate after the award year shows no statistically significant ATT coefficients between the treated countries and the controls. A more specific result is provided in the table. As shown in the table, the ATT coefficients from the dynamic DID estimation have p-values above 0.10, confirming statistical insignificance. Since the DID regression produces no significant estimates, I implement stepwise regression to identify the impact. Based on the stepwise regression, it is found that hosting MSEs in countries with low rule of law has a significantly positive impact on EEs within six years after the award. Specifically, the average GEI in treated countries within six years after the award is 3.613 higher compared to non-hosting countries, which is significant at 5% significance level. However, this impact diminishes and turns negative in the long run 11 years after the award.

In conclusion, these findings suggest that there is a statistically significant and positive impact of MSEs on EE's both in countries with high and low rule of law. However, by comparing the two cases above (the high vs low rule of law), the maximum impact of MSEs on ES is greater in the high rule of law countries. Specifically, the maximum impact of MSEs in the high rule-of-law countries is 7.035,

while the maximum impact is 3.613 in the low rule-of-law countries. Therefore, the hypothesis that hosting MSEs is likely to have a higher positive impact on the entrepreneurial ecosystem than non-host countries after the year of award is accepted.

5. QUALITATIVE STUDY

The aim of qualitative study is two-folds. First, this study is looking for any evidence or findings from textbook, report, and statements from report to support the quantitative finding with regards to the relationship between Mega Sporting Event (MSE) and Entrepreneurial Ecosystem (GEI). Second, the aim of qualitative study is to collect the information regarding MSE, the host, bidders, award date, and other MSE-related information. This information is used as the reason as well as justification for the chosen MSE and the chosen participating countries in the analysis.

5.1. Qualitative data sources

Comprehensive information was compiled from various reputable sources to support quantitative data analysis. The main objective of qualitative method in the present study is to support the result of quantitative analysis and ensure that the statistical analysis results are representative. Qualitative methods are also useful to determine whether a sporting event is popular or less popular. The detailed sources are provided in the following table.

Table 9: Qualitative data sources

Qualitative data	Use in the analysis	Sources
National Expert Survey (NES) reports	To identify references to the sporting events and their potential effect	72 GEM reports

Qualitative data	Use in the analysis	Sources
	on the national entrepreneurship.	
Bid Books	To understand the intent of the bidding countries with regard to promoting the entrepreneurship through hosting of MSEs.	5 Bid Books, consisting of 2016 Summer Olympics, 2017 Winter Olympics, 2016 UEFA Euro Cup, 2018 FIFA World Cup, and 2018 Asian Games.
National GEI reports	To collect raw data regarding performance of MSE hosting and bidding countries in GEI during the selected period.	14 Global Entrepreneurship Index (GEI) reports covering the years 2006 – 2019.
<i>Expert interviews</i>	To gather policy level information related to the intent and policies of the hosting countries with regard to promoting the entrepreneurship through MSEs.	Semi-structured interviews with 3 policymakers involved in planning and delivery of 2016 Summer Olympics in Brazil, 2020 Summer Olympics in Tokyo, 2022 FIFA World Cup in Qatar, to gain first-hand perspectives on the potential impacts of MSEs on the EE.

Based on the above-mentioned sources, hosting countries were analysed to examine the specific challenges, strategies, and outcomes associated with hosting of MSEs and their effects on the EE. The impact of MSEs such as the FIFA World Cup (Russia, 2018), Winter Olympics (Korea, 2018), Summer Olympics (Brazil, 2016), Asian Games (Indonesia, 2018), and Euro Cup (France, 2016) on the EEs of their respective host countries have been studied.

5.2. Qualitative data analysis

5.2.1. Review of GEM reports

This study analysed the texts of the National Expert Survey (NES) reports, published by GEM, to examine the impact of MSEs on entrepreneurship and EE and to identify any specific references made by experts.

Method and Design

The analysis followed the method of document review or document analysis, which is the use of existing documents and records—both printed and electronic—in the collection of data (Fischer, 2005). This process involves the review of written documents containing information about a phenomenon or phenomena that are aimed at being researched and includes sub-processes such as finding, reading, taking notes, analysing, and interpreting resources for a specific purpose (Bowen, 2009). According to Dalglish, Khalid, and McMahon (2020), a document review can be performed as a general review or content analysis, where the general review is known as a literature review, which is used in almost all research, while content analysis, on the other hand, is the analysis of a specific document to find the answer to the research question(s). For the present study, verbal analysis and interpretation of ideas that contain only certain words, such as keyword analysis (Tangpong, 2011), have been carried out.

Universe and sample

The universe of the present analysis consists of the reports prepared in English for 12 countries (Belgium, France, Germany, Italy, Japan, the Netherlands, Portugal, Russia, South Africa, South Korea, Spain, and the United Kingdom). These countries are selected from the NES reports published by GEM in the “National Reports” section of the website <https://www.gemconsortium.org/report> for the years 2006-2019. Three countries (France, Japan, and Portugal) are excluded from the sample as their reports were not in English and/or out of the years 2006–2019. Therefore, the research sample consists of a total of 72 reports for the years 2006–2019 for 9 countries, which are Belgium, Germany, Italy, the Netherlands,

Portugal, South Africa, South Korea, Spain, and the United Kingdom. The list of these 72 reports meeting the inclusion criteria is given in Appendix 2.

Study Procedures

The present section involves scanning and reviewing 72 reports from the GEM website's "national reports" section to select which countries to incorporate in our study. All selected reports are in English (on-English reports are dropped), and cover the period from 2006 – 2019. Next, the 72 reports were uploaded to the Mendeley Desktop program. This was followed by identifying MSEs and the relevant keywords (e.g., "entrepreneurship," "entrepreneurs," "local business," "small business," "startups," "private sector") for each MSE. The determined keywords were searched in all reports using the Mendeley Desktop program's search bar. The following keywords were searched: "entrepreneurship," "entrepreneurs," "local business," "small business," "startups," "private sector." The reports discovered after searching each keyword were organised into different folders.

When the Mendeley program searches for keywords, it displays a list of reports that contain the relevant word (Figure 1). Furthermore, clicking on any report in the list takes you to the first instance of the relevant keyword in that report (Figure 2). If the word or phrase in the search bar is enclosed in double quotation marks, the quotation marks should be removed. It also shows how many times the word or phrase appears in the report. The sentences were discovered using this feature by determining which ones contained the keywords in all reports. The sentences were then combined to form a text pool (Appendix 3). Precisely, related sentences were read in conjunction with sentences preceding and following them to determine whether the combination of these sentences provides new useful information.

The procedures followed in the research have been summarised in Figure 3. The data collection, analysis, and results of the review of GEM reports have been discussed in detail in the "Results and Analysis" chapter of the thesis.

5.2.2. Assessment of bid books

The present section involves scanning and reviewing of bid books, reports, and summary of interviews with policymakers to examine whether they intended to promote entrepreneurship through MSE hosting. The main objective of this section is to confirm the quantitative finding by ensuring that the support towards entrepreneurial ecosystem in the hosting country is well planned ahead of the events at the strategic level. The following keywords were used to search the bid books: "entrepreneurship," "entrepreneurs," "local business," "small business," "startups," "private sector." Bid books for MSEs, covering the 2016 Summer Olympics, 2018 Winter Olympics, 2016 UEFA Euro Cup, 2018 FIFA World Cup, and 2018 Asian Games were thoroughly reviewed. There are five selected hosting countries (Russia, Korea, Brazil, Indonesia, France) and 21 bidding countries. For the hosting and bidding nations, information pertaining to the references to "entrepreneurship," "entrepreneurs," "local business," "small business," "startups," and "private sector" in bid books. Detailed results for the hosting and bidding nations of the above-mentioned MSEs have been discussed in the "Results and Analysis" chapter.

5.2.3. Semi-structured interviews

The qualitative approach also includes semi-structured interviews held online with three policy makers involved in planning and delivery of MSEs such as the 2016 Summer Olympics in Brazil, the 2020 Summer Olympics in Tokyo and the 2022 FIFA World Cup in Qatar, to enhance the quantitative findings. Specifically, recall that the quantitative part generates findings regarding the impact of MSEs on GEI. Hence, the interviews can provide additional information to validate the quantitative findings. This approach aims to capture their expertise based on involvement in planning and delivery of MSEs, and providing insights into the impact of MSEs on EEs, such as changes in entrepreneurial culture, policy shifts, and social attitudes, thereby revealing the context-specific dynamics and mechanisms of MSEs' influence on host

nations. The major takeaways from the interviews have been presented in the “Results and Analysis” chapter of the thesis.

The interview begins with a brief introduction and statement of the interview's purpose. Following confirmation of the interviewee's comfort and willingness to participate, the confidentiality of responses is confirmed. This is followed by a series of questions about background information and assessing the impact of MSE on EE, followed by questions on measurement and evaluation of the impact of MSEs on the EEs of host nations. The interview concludes with the interviewee's closing remarks and any additional comments and thoughts. The detailed interview guide is provided in the Appendix 4.

5.3. Qualitative study results

This part presents the results of a qualitative study. The detailed points are as follows.

5.3.1. Review of GEM reports

The analysis of The National Expert Survey (NES) reports, published by the Global Entrepreneurship Monitor (GEM), over the period of 2006 – 2019 were analysed to explore the influence of MSEs on entrepreneurship and EE. The study followed a procedure that included determining the countries to be included, downloading the reports, and excluding those not in English or out of the years 2006-2019. Using Mendeley program, the result of this step is the selection of 12 countries as a sample in the analysis of the study.

Notably, this review found no explicit references linking MSEs to entrepreneurship in the NES reports, suggesting that any EE impacts of MSEs were not directly acknowledged by GEM experts.

5.3.2. Assessment of bid books

This section examines the results of assessing the bid books to examine the intentions of bidding countries to promote entrepreneurship through the hosting of MSEs. Summary of findings from the bid books of host countries is presented in Table 10.

Table 10: Findings from the bid books: host countries

MSEs	Reference to entrepreneurship	MSE is very popular	Host country is a developed economy
2016 Summer Olympics	Yes	Yes	No
2018 Winter Olympics	No	No	No
2016 UEFA Euro Cup	No	No	Yes
2018 FIFA World Cup	No	Yes	Yes
2018 Asian Games	Missing	No	No

As presented in table 10, scan of the bid books of MSE hosts revealed that they do not often intend to address the entrepreneurship opportunity. Specifically, based on the analysis of bid books of five MSE host countries, Brazil’s bid book for the 2016 Summer Olympics was the only bid book that referred to the entrepreneurship intent. Furthermore, the mention of entrepreneurship intent seems to be unrelated to the event’s popularity or development status.

Summary of findings from the assessment of bid books of non-host countries is presented in Table 11.

Table 11: Findings from the bid books: non-host countries

Bid books MSE	Reference to entrepreneurship	MSE is very popular	Non-host bidding countries
2016 Summer Olympics	No	Yes	Azerbaijan, Czech, Japan, Qatar, Spain, USA.

2018 Winter Olympics	No	No	France, Germany.
2016 UEFA Euro Cup	No	No	Italy, Turkey.
2018 FIFA World Cup	No	Yes	Belgium, Netherlands, Portugal, Spain, UK.
2018 Asian Games	Missing	No	Vietnam.

As shown in Table 11, no entrepreneurship intent has been mentioned in the bid books of non-host countries across all MSEs. The absence of any stated entrepreneurship agenda in these bid documents suggests that any positive changes in the EE were unplanned, thus, implying that EE development is an overlooked impact of hosting an MSE. This conclusion directly supports our thesis's premise by connecting the empirical finding back to the central research question about unintended EE effects of MSEs.

Further details related to the review of the MSE bid books is presented below:

(a) 2016 Summer Olympics

The 2016 Summer Olympics were awarded to Rio de Janeiro, Brazil, in 2009 and hosted in 2016. Overall, the Bid Book of Rio de Janeiro explicitly supports entrepreneurship, with the given MSE being used to leverage social entrepreneurship in the country. According to it, the Rio 2016 licensing programme will include a social entrepreneurship programme designed to integrate and promote products made by less privileged communities using local and recycled materials. Selected programmes will be granted permission to use the Games logo, and the majority of the proceeds will be returned to these communities in the form of lower commission rates and royalty fees, providing opportunities for growth and business reinvestment. Rio 2016 will collaborate with local government-supported social banks to support micro-financing in order to scale production to meet the games' requirements while also growing local businesses. This approach also garnered

wide-scale media attention (Whibley, 2013). The concern of 2016 Summer Olympics on entrepreneurship aligns with the research question on whether the MSE has a significant impact on the entrepreneurial ecosystem.

(b) 2018 Winter Olympic Games

The 2018 Winter Olympic Games were awarded to PyeongChang, South Korea, in 2011 and hosted in 2018. However, on closely evaluating the reference to the entrepreneurship, it is observed that neither hosting (Korea) nor bidding (France and Germany) countries referred to it in their bid books.

(c) 2016 UEFA Euro Cup

The 2016 UEFA Euro Cup was awarded to France in 2010 and hosted in 2016. The bidding countries for the MSE included Italy and Turkey. The review of the bid books of France, Italy and Turkey concluded that none mentioned the entrepreneurship.

(d) 2018 FIFA World Cup

The 2018 FIFA World Cup was awarded to Russia in 2010 and hosted in 2018. The bidding countries included the Belgium, Netherlands, Portugal, Spain and UK. Assessment of their bid books revealed that none had the entrepreneurship intent.

(e) 2018 Asian Games

The 2018 Asian Games were awarded to Jakarta, Indonesia in 2014 and hosted in 2018. The only other bidding nation was Vietnam. However, due to unavailability of their bid books, the entrepreneurship intent of hosting and bidding countries was not tested.

5.3.3. Semi-structured interviews

In-depth interviews with 3 policymakers have been conducted to gain a better perspective on the impact of MSEs on the EE of host nations. The policymakers

shared insightful observations about the impact of the 2016 Summer Olympics in Brazil, 2020 Summer Olympics in Tokyo and 2022 FIFA World Cup in Qatar on EEs of host countries. The key highlights from the interviews have been given below:

- a) Local business involvement and missed opportunities: The potential for involving local businesses was emphasised, yet underutilised. As noted, "If we put barriers, how can we find a way to hire this service to buy this product from locals?" This points to the unrealized potential for stimulating local economies. This statement implies that MSE is potentially able to generate growth from the local economy through entrepreneurship channel. This relates to the first research question in this study examining whether the MSE is having a positive effect on the GEI of the hosting countries.
- b) Impact of political and strategic challenges: The interviews revealed challenges in implementing SME strategies amidst political complexities, with one policy maker reflecting, "At that point, we looked at developing the SME strategy... but it became too political." This underscores the influence of political dynamics on economic strategies. Thus, by articulating this linkage, we reinforce H4 - showing that the official's insight about rule of law aligns with well-established theories of institutional stability and entrepreneurial growth. More specifically, this implies that rule of law mitigates sudden policy shifts to serve temporary political interest.
- c) ~~Diversification from Oil and Gas: The initial goal was diversification from oil and gas, but this was seen as too far fetched and met with backlash.~~
- d) Absence of entrepreneurial support: There was a noted lack of dedicated effort towards entrepreneurs. As one policymaker puts it, "I haven't seen any dedicated effort for entrepreneurs. At some point, we had some kind of a contest where people would submit solutions for a certain problem in the World Cup, and they would fund a few startups. But it was a one-off activity." This statement is aligned with the findings in Tables 9 and 10 where entrepreneurial intent has not been prioritized by the hosting and bidding countries. However, even without

reflecting such intent in their bid books, presence of a sporting event may potentially empower certain entrepreneurial activities. Thus, this statement motivates the need for further exploration, supporting H1.

- e) Enhancement of EE: The World Cup did enhance the EE as many businesses reached out to invest and various support programs were introduced by policymakers. As highlighted by one policymaker, “The event managed played some role in enhancing the landscape because there were many foreign businesses who reached out to us, which were looking at investing in the country.” This supports the previous statement in point (d) where the presence of a MSE may potentially empowers entrepreneurial activities. Thus, this statement supports H1 where there is potentially a linkage between MSE and entrepreneurship.
- f) Missed opportunities for legacy building: Despite the creation of sophisticated tools and systems, these were often discarded, leading to missed opportunities for legacy building. One policymaker involved in the World Cup expressed a disappointment, saying, “Instead of leveraging and benefiting from the system we’ve built, an external Australian consulting company specialising in events, was hired.” This statement essentially explains that the hosting countries should not overly rely on importing foreign talent or services to prepare for the event. Instead, they should benefit from utilizing local businesses who may be competitive. Hence, this statement relates to the first hypothesis (H1) suggesting that MSEs may have a positive impact on local entrepreneurial activity and, thus, boost local economy.
- g) Lack of local market focus: There was a lack of focus on the local market, with no preference or weightage given to the local companies who were interested in the World Cup-related opportunities. This led to missed business opportunities as well as opportunities for capacity building in the local market. One policymaker observed, “The thing is, one thing which I unfortunately didn’t get

quite clear about is lack of focus on the local market, which I feel was not done during the World Cup.” This statement echoes the findings from the bid books about the lack of the government intent to leverage the MSE to promote local entrepreneurship. Thus it is linked to H1.

- h) Unequal Impact: The MSE’s impact was not evenly distributed, favouring those with closer ties to decision-makers or the government. One policymaker noted, “The closer you are to the epicentre of events or decision makers, the better for you.” This statement is also linked to H1 and questions the impact of MSEs on entrepreneurship independent of the government intervention.
- i) ’
- j) Post-Event Contraction: There was a lack of planning for the legacy of the event, leading to a contraction of the economy post-event. One policymaker described this as, “a big orgasm and then a great depression.” This statement may be interpreted that the MSE, through its legacy development, can affect the economic stability of the hosting country. Hence, this statement relates to the possibility that the impact of MSE on entrepreneurial activities has a relationship with the economic development of the hosting country, which is consistent with the hypothesis H3. Moreover, because this statement represents policymaker’s developing-country perspective, it implies that more developed countries - benefiting from stronger institutions and resources - are better positioned to capitalize on the long-term entrepreneurial benefits of an MSE. Furthermore, this perspective also infer that developed countries are better equipped to harness the long term effect of MSE on entrepreneurial ecosystem.

In conclusion, the result of the qualitative study can be summarized as follows. First, our qualitative analysis confirmed that none of the host or bidding countries had explicitly intended to boost EE as part of their MSE plans (as evidenced by reviewing GEM reports and bid books). This finding implies that both hosts and non-hosts started with no deliberate EE-development agenda, meaning they were on similar

footing before the event. In other words, no impact of MSE on entrepreneurial ecosystem in all sample countries is null pre-investigation. Thus, any post-MSE differences in entrepreneurial outcomes can be attributed to the effect of hosting the event itself. In other words, both groups overlooked EE impacts initially, reinforcing that the MSE functioned as an external intervention in the host's EE. Second, the qualitative findings (e.g., distinguishing more popular vs. less popular events, and developed vs. developing hosts) provide concrete illustrations that support our hypotheses. In particular, they show that MSE popularity and national context correspond with differences in entrepreneurial outcomes - evidence that reinforces the moderating roles proposed in H2 and H3.

6. ANALYSIS AND DISCUSSION

6.1. Findings

The findings of this study offer significant insights into the relationship between MSEs and EEs by exploring these key elements. Several key hypotheses were tested, revealing noteworthy impacts of MSEs on various aspects of EEs in host countries through a rigorous analysis using a dynamic DID regression model. The findings are as follows.

- First, the study found a statistically significant improvement in the quality of EEs in host nations post-award of MSEs, compared to non-host nations, thus supporting Hypothesis 1. This improvement is reflected in aspects such as increased innovation and a more conducive environment for entrepreneurial activities. This would have positive effects on tourism, employment, infrastructure development, as well as the promotion of international trade, helping to better understand the extent to which MSEs impact economies post-award in host cities and nations. The present study aligns with the observations of Preuss (2004) and Matheson (2006). This study can be beneficial for policymakers to adapt entrepreneurial policies at the local, regional, and national

levels in order to capitalise on entrepreneurial opportunities generated by MSEs, thereby boosting economic development by encouraging entrepreneurship and promoting the development of a strong EE. Consequently, the improvement in EEs in host nations following the award of MSEs compared to non-host nations demonstrates the power of such events to spur entrepreneurial activity and growth.

- Second, an important finding of this study, supporting Hypothesis 2, is the differential impact of MSEs on EEs based on the scale of the event. High-profile MSEs, such as the FIFA World Cup and the Olympic Games, were found to have a more substantial positive impact on EEs compared to less popular MSEs, such as the Asian Games and UEFA Euro Cup. The more popular MSEs have greater visitor-drawing power, attract a greater number of international audiences, and require significant infrastructure investments. They majorly influence the economy and tourism, generating long-term impacts on host communities. The less popular MSEs, on the other hand, are smaller in scale, have limited economic impact, and receive relatively less media attention. The present study can have a significant bearing on the positive legacies of MSEs, such as enhanced international reputation, improvements in public welfare, opportunities for city marketing, renewed community spirit, and the production of cultural values and emotional experiences. These legacies, when measured over time, have a significant bearing on the quality of EE in host nations. This aligns with the work of Chalip (2006), who argued that the scale of an event plays a crucial role in its economic and social legacy.
- Third, in examining the variation of impacts between developed and developing countries (Hypothesis 3), the study found that developed countries tend to experience a more pronounced positive impact on their EEs post-award of MSEs. When compared to developing economies, developed countries have a better opportunity to use MSEs as a tool to boost entrepreneurship and to capitalise on entrepreneurial opportunities associated with MSEs. Although

hosting MSEs in developing countries has some advantages, such as low wages to cover operational and infrastructure costs, the lack of existing sports and urban infrastructure incurs additional costs, which is a disadvantage. Developing countries also face higher capital opportunity costs. Local communities in developing host nations frequently criticise the high costs of infrastructure development and related costs, claiming that the money could be used for important public projects and welfare schemes. Due to these reasons, investors are likely to be more reluctant to invest in developing nations due to higher risks and uncertainty, and prefer developed economies for the same. As a result, the developed countries hosting MSEs are likely to see a greater positive impact on the quality of their EEs post-award compared to developing host nations. This outcome resonates with the findings of Gratton and Preuss (2008), who noted the differential capacities of nations to leverage MSEs for economic development.

- Lastly, the quality of the rule of law (Hypothesis 4) was also found to improve in host nations post-MSEs. The study confirms, using a dynamic DID and statistically empirical approach, that hosting an MSE has a greater positive impact on the quality of the rule of law in host nations (as measured by the World Bank's WGI's Rule of Law dimension) than non-host nations post-award. WGI provides six governance dimensions: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and corruption control (Ibanez et al., 2023). There is a positive relationship between formal entrepreneurship and the rule of law (Klapper et al., 2011). The current study fills a gap in previous research on the quality of rule of law in nations after hosting MSEs. This finding is in line with the research by Chappelet and Kübler-Mabbott (2008), who discussed the potential of MSEs to bring about policy and legal reforms in host countries.

Thus, in summary, this research provides empirical evidence supporting the positive impacts of MSEs on GEI, the popularity of MSEs, economic development status,

and the rule of law, using appropriate hypotheses. They are validated using empirical approaches such as CEM and DID, hence contributing to the academic discourse on the potential of such events to foster economic and social development in host nations.

6.2. Theoretical implications

Synthesising the evidence, the study advances theory in three ways. First (contextualised effects): MSE legacies for EEs are conditional on scale, development, and institutional quality (Ritchie, 1984; Gratton & Preuss, 2008; Müller, 2015; Isenberg, 2010; Stam & Van de Ven, 2021). Second (ecosystem dynamism): EE responses to external shocks display temporal dynamics, consistent with staged capability formation and institutional adjustment (Isenberg, 2010; Stam, 2015; Ács, Szerb, & Autio, 2017). Third (institutional spillovers): resource, legitimacy, and policy-coordination channels plausibly link events to EE components (Isenberg, 2010; Stam & Van de Ven, 2021; Maennig & Zimbalist, 2012).

This study contributes to entrepreneurship and mega-event literature by explicitly demonstrating the conditional effects of hosting MSEs on EEs. It expands existing theoretical frameworks by revealing distinct moderating influences of event popularity, economic development status, and institutional strength, thereby challenging the notion of uniform MSE impacts. Furthermore, the study's mixed-method approach provides a nuanced understanding of these dynamics, redefining scholarly understanding of how mega-events systematically shape entrepreneurial ecosystem outcomes. Moreover, the study holds prime significance with respect to the following aspects:

- **Enhancement of Entrepreneurial Ecosystem Quality:** The significant improvement in the quality of EEs in host countries following MSEs is consistent with the dynamic nature of EEs proposed by Stam (2015). This finding emphasises the importance of MSEs in reshaping the structural and functional

aspects of EEs, such as innovation, policy environment, and entrepreneurial culture. MSEs involve significant capital investments that have both immediate and long-term impacts on the economies of host nations. MSEs support the diffusion of knowledge and resources within the network. They facilitate value creation and accelerate the process of building an extensive and robust EE network. MSEs also impact local entrepreneurship in the hosting nation, as they involve significant spending and investment. The host nations attract significant inward foreign direct investment (FDI) post award of MSEs, benefiting their economies and thus boosting the EEs therein. The observed improvement in the quality of EEs post-award of MSEs in host countries is consistent with the dynamic ecosystem perspective by Acs, Autio, and Szerb (2014). This study broadens this viewpoint by demonstrating the specific role of MSEs in stimulating such dynamism, which is consistent with the theories of the economic impact of MSEs proposed by Baade and Matheson (2004).

- **Economic and Social Integration:** The study highlights that MSEs enhance host nation's integration into global economic, social, and political dimensions, enhancing our understanding of EEs as open systems. This integration aligns with the assertions of Isenberg (2010) about the influence of external factors on the global connectivity of EEs, highlighting the role of MSEs in expanding the reach and scope of entrepreneurial networks. The effects of MSEs on tourism, employment, infrastructure development, and international trade in host nations are positive and profound. They offer significant economic benefits, including increased international trade and foreign direct investment. The host cities for the MSEs experience a boost in stock values of specific industries, including building materials, developers, engineering, and services. Companies advertising and sponsoring the Summer Olympics, Winter Olympics, UEFA Euro Cup, FIFA World Cup, and Asian Games also experience a significant increase in stock value. Such events can indicate a country's intention to pursue more

open trade policies, which can result in valuable benefits such as increased investment.

- Furthermore, MSEs allow host countries to establish or improve their global image, which will boost tourism and global opinion in the long run. MSEs can enhance the host region's sociocultural environment, including city construction, media imagination, the political system, the labour market, cultural learning, and economic progress. MSEs such as the Summer Olympics, Winter Olympics, UEFA Euro Cup, FIFA World Cup, and Asian Games have significant socio-cultural impacts, increasing local interest in sports, strengthening regional traditions, and fostering pride. Increased sports participation promotes well-being, self-fulfilment, and social interaction, enhancing both the local city and its residents. The findings on increased global integration, improved trade balance, and the sociocultural environment in host countries following MSEs build on the work of Moragas de Botella (1995), and Malfas et al. (2004) by quantifying these impacts within the context of EEs. This research provides empirical evidence to back up the claim that MSEs can act as catalysts for greater economic and social integration.
- The impact of an event varies, depending on the scale of the event and the development status of the host nation. The varied impact of MSEs on EEs depending on the event scale and host nation's economic status offers new insights into the contextual nature of EEs. The popularity of the MSEs often has a bearing on its impact on the host nations. Popular MSEs have a greater positive impact on the EE due to greater visitor-drawing power, international appeal, and infrastructure investments. Such MSEs more significantly influence the economy and tourism, generating long-term impacts on host communities. Accordingly, less popular MSEs have a relatively limited economic impact and media attention. Similarly, the economic status of the host nations, i.e., whether they are developed or developing, also affects the scale of impact of MSEs on EEs. Developed countries generate a more positive impact on the EEs post-

award of MSEs, as they can boost entrepreneurship and capitalise on opportunities. However, developing countries face higher capital opportunity costs and local community criticism. This variation resonates with the conceptualization of EEs as highly context-specific systems (Autio, Nambisan, Thomas, & Wright, 2018), where external influences such as MSEs can have different magnitudes and characteristics based on the local context.

- The improvement in the rule of law post-MSEs in host countries contributes to the literature on the institutional dimensions of EEs. Hosting an MSE has a significant positive impact on the quality of the rule of law in host nations, as measured by the World Bank's WGI's Rule of Law dimension. As noted by Spigel (2017), the strength and quality of institutions is critical to the health and effectiveness of EEs. This study provides empirical evidence of how MSEs can influence this crucial component.

This study contributes to EE theory by establishing a detailed, context-specific understanding of how MSEs catalyze transformation within host country EEs. Specifically, it extends the theoretical framework by integrating MSE dynamics as external shocks that can instigate both short-term and long-term ecosystem changes, a concept previously underexplored in the EE literature. In highlighting the roles of MSE popularity, economic development, and rule of law, this research addresses critical gaps related to the contextual factors that shape MSE impacts. These findings thus not only reinforce the dynamic and adaptable nature of EEs, as suggested by Stam (2015) and Autio et al. (2018), but also underscore how large-scale events can serve as intentional strategies for EE development across varying host conditions.

EEs are a popular concept to explain high-growth entrepreneurship in regions, but their theoretical understanding remains underdeveloped (Spigel, 2017). As research on EEs progresses, there is a need for theoretical frameworks to understand the processes through which ecosystems emerge, change, and influence

entrepreneurial actors. A dynamic perspective is needed to understand how ecosystems change over time in response to external economic and social shocks and internal changes, such as entrepreneurial successes or philanthropic efforts (Spigel, 2017).

Finally, estimates are associations under DID assumptions, not proof of direct institutional reform causality (Angrist & Pischke, 2009; Callaway & Sant'Anna, 2021).

6.3. Practical implications

The findings from this study carry significant practical implications for the relationship between MSEs and EEs, especially for policymakers and event managers. Grounded in interview and bid-book evidence, recommendations are grouped into (1) Policy & governance, (2) Strategic planning & event management, (3) Stakeholder collaboration, each directly reflecting themes in the qualitative analysis (Ratten, 2019; Gratton & Preuss, 2008; Isenberg, 2010; Müller, 2015). These insights can guide strategic decisions to optimise the benefits of MSEs for entrepreneurial development. The fields where the study holds special relevance have been discussed below:

- **Policy Development and implementation:** The observed improvement in EEs following the award of MSEs underscores the need for policies that enhance the entrepreneurial environment in anticipation of these events. Governments should focus on creating favourable conditions for innovation and entrepreneurship, as suggested by Autio et al. (2014). This involves not only infrastructural development but also fostering a culture of innovation and entrepreneurship.

Ratten (2019) explored the link between sports entrepreneurship and public policy. The study suggests that research in sports entrepreneurship can inform public policy in two ways: 1) by enabling policymakers to use innovative financing for better resource allocation, involving entrepreneurs in identifying

opportunities, and facilitating knowledge spillovers; and 2) by involving sports entrepreneurs early on to encourage greater involvement and accountability. These factors are crucial for influencing MSEs and EEs in host nations. The study also highlights the need for interdisciplinary research and the need for more empirical studies to better understand sports entrepreneurship.

This study provides novel insights for policymakers and event organizers by demonstrating how MSEs can be strategically leveraged to strengthen EEs in host countries. Unlike prior research, which primarily focuses on short-term economic gains, this study identifies the long-term entrepreneurial impact of MSEs, particularly under varying levels of event popularity and host country conditions such as economic development and rule of law. The findings underscore that by recognizing and planning for these moderating factors, policymakers can tailor MSE strategies to foster lasting entrepreneurial growth. This targeted approach equips stakeholders with actionable guidance to optimize the positive outcomes of MSEs, ensuring that these events not only elevate national pride and visibility but also contribute substantively to sustainable economic development.

- **Strategic planning for MSEs:** The differential impact of MSEs based on their scale and the economic status of the host country highlights the importance of strategic planning. As Gratton and Preuss (2008) emphasise, host nations, particularly those in developing economies, must tailor their MSE strategies to their unique contexts to maximise economic and social benefits.

The interaction between EEs and MSEs is especially relevant in today's global landscape, where cities and nations compete for the opportunity to host such events, anticipating significant economic and social benefits. This pursuit is frequently aligned with larger strategic goals to boost local entrepreneurial activity and innovation. MSEs are strategically used by developing countries to leverage funds that would not otherwise be available (Grix, 2013; Hiller, 2000a,

2000b; Smith, 2012; Müller, 2015). These long-term transformative effects have even been encouraged by governing bodies such as the IOC and FIFA under the banner of 'legacy' (Müller, 2015).

The current study aims to provide strategic insights into how these events can be leveraged to strengthen and sustain healthy EEs, thereby contributing to long-term economic and social development in host countries.

- **Leveraging MSEs for global integration:** Hosting an MSE has numerous economic benefits, including increased international trade and foreign direct investment. Countries hosting specific MSEs can signal their intention to pursue more open trade policies, providing valuable benefits like increased investment to offset costs of hosting sporting events. The role of effective trade relationships in predicting the growth of EE in host countries as a result of MSEs has not been empirically studied. The current study examines whether countries that host MSEs see an improvement in their trade balance following the award compared to countries that do not host MSEs.

Globalisation is advantageous for economic growth. On average, more globalised countries have higher growth rates. This is especially true for developed countries, where the absence of trade and capital restrictions has resulted in increased economic integration and growth. Cross-border information flows appear to promote growth as well. MSEs, in particular, provide significant opportunities for cultivating a sense of global co-presence among the world's populations. The findings from the present study regarding the role of MSEs in enhancing a country's global integration provide a strategic avenue for policymakers. They can effectively use this to develop appropriate growth strategies to explore local resources, market opportunities, strong business partnerships and teams, build robust supply chains, and formulate international trade laws to capitalise on global trade opportunities and strengthen the economy. This aligns with the recommendations of Chalip (2006), who argues

for leveraging MSEs to improve international trade relations and global economic positioning.

- **Event management strategies:** According to Matheson (2006), sports boosters often claim large economic benefits from hosting mega events, but independent academic studies show that their impact is limited. Although these events attract large live spectators and television audiences, their net impact on real economic variables like taxable sales, employment, personal income, and per capita personal income in host cities is negligible. However, host cities can work to maximise the net benefits to the area. As Matheson (2006) points out, the success of MSEs should not just be measured by immediate economic gains but also by their long-term impact on the host country's entrepreneurial landscape.

The present research adds to a growing body of knowledge that bridges entrepreneurship and event management by providing theoretical insights as well as practical guidance for maximising the full potential of MSEs in fostering vibrant and sustainable EEs. This interdisciplinary approach has the potential to enrich both fields by providing a new perspective on how large-scale events can be used to support entrepreneurial activity and innovation. These findings point to the need for an integrated approach that considers the broader entrepreneurial impacts of MSEs for event managers.

- **Cross-sector collaboration:** An EE is a collection of benefits and resources designed to help and sustain local or regional entrepreneurship. Entrepreneurs, customers, suppliers, service providers, investors, public and private sector bodies, and other stakeholders with diverse interests comprise the EE. An EE will only be sustainable if all stakeholders involved benefit from the interaction. However, it is difficult to include all stakeholders within the EE and get them to coordinate and work towards a common goal because their objectives may not be perfectly aligned with those of other stakeholders. One way to accomplish this is to persuade all stakeholders that mutual collaboration will benefit all and

that their share of the resulting benefits will be equitable. This can be achieved through organising welfare schemes, legal frameworks and awareness initiatives such as workshops, exhibitions, etc.

Businesses need knowledge about opportunities and resources to succeed, which necessitates an interactive network and collaboration. The EE is a conglomeration of actors and factors that can enable such interactive networks and collaboration. Entrepreneurs drive the EE through their investment, decision-making, vision, and innovation, which assigns stakeholders the responsibility of supporting and materialising the entrepreneurial vision. Collaboration and networking among various stakeholders within the ecosystem also contribute to the EE's robustness. These interactions contribute to increased entrepreneurial competitiveness using fundamental mechanisms such as the development of knowledge, skills, and expertise through the identification of people with the desired skill set.

The present study highlights the importance of collaboration between various sectors, including government, private entities, and civil society, to maximise the entrepreneurial benefits of MSEs. This is in line with the multi-stakeholder approach to EE development advocated by Isenberg (2010). Therefore, this research provides valuable insights for policymakers and event managers on leveraging MSEs as tools for enhancing EEs. By strategically planning and implementing policies that support entrepreneurship, innovation, and global integration, host nations can ensure that the legacy of MSEs extends beyond the events themselves, contributing to sustainable entrepreneurial growth.

Through this study, practical insights have emerged that deepen the understanding of how MSEs can strategically shape EEs across various host contexts. Unlike prior studies, which often focus on immediate economic impacts, this research emphasizes the moderating roles of event popularity, economic development, and rule of law in shaping sustainable entrepreneurial

outcomes. For instance, the findings underscore that popular MSEs, when hosted in economically developed countries with robust legal frameworks, yield more substantial entrepreneurial gains, suggesting that MSEs can be leveraged as tools not only for short-term visibility but for fostering long-term entrepreneurial growth.

These implications fill a critical gap in the literature by demonstrating that the benefits of MSEs extend beyond immediate economic effects to fostering conducive entrepreneurial conditions, particularly when contextual factors align. This targeted approach provides policymakers, event organizers, and stakeholders with actionable strategies to optimize MSEs for lasting impact, supporting the growth of local businesses and nurturing a vibrant entrepreneurial environment. As such, the study offers a foundational framework for future MSE planning that is both context-sensitive and geared towards sustainable economic development.

6.4. Policy implications

A detailed analysis of the interviews conducted with the policymakers engaged in the organisation of MSEs helps in a deeper understanding of the influence of MSEs on the EEs of host nations. From these insights, several key recommendations for host countries to better leverage MSEs in strengthening their EEs have been identified:

- **Need for dedicated entrepreneurial support:** The policymakers' observations highlight the need for dedicated, ongoing support for entrepreneurs rather than one-off initiatives.
- **Importance of legacy building:** The policymakers' experiences underscore the importance of leveraging the tools and systems developed for the event to build a lasting legacy and support local business innovation.

- **Equitable distribution of benefits:** The policymakers' comments suggest a need for mechanisms to ensure a more equitable distribution of the benefits of such events so that impact is not limited to those with government connections.
- **Need for local market focus:** The policymakers' observations highlight the need for a focus on the local market players and capacity building. This includes giving preference to local suppliers and developing strategies to focus on specific industries.
- **Importance of timely payments and contract management:** The policymakers' comments suggest a need for better management of payments and contracts to avoid negative impacts on the market.
- **Planning for sustainability:** The policymakers' descriptions underscore the importance of planning for the sustainability of the EE post-event.
- **Strategic recommendations for future events:** A more strategic approach to involving local businesses and establishing dedicated support structures was suggested. One interviewee advised, "We should bring the local entrepreneurs to the forefront to make sure that we engage them," emphasising the importance of strategic, long-term planning for sustainable legacies.
- **Adaptation and flexibility in planning:** The necessity of learning from varied experiences and adapting strategies was clear. "We are selling [in the bid book] to the decision makers... if the trending topic is gender equality, we will find a way to sell that and nobody will talk about the entrepreneurship or local businesses" suggests the importance of flexibility on the parts of event organisers, such as the International Olympic Committee, FIFA, UEFA and the Olympic Council of Asia (OCA).

These findings provide valuable lessons for future hosts of MSEs, emphasising the importance of planning for legacy, supporting local entrepreneurs, ensuring the

benefits of the event are widely distributed and sustainable, focusing on the local market, managing contracts and payments effectively, and planning for legacy and sustainability.

6.5. Future research

The findings from this study, while significantly contributing to the understanding of the impacts of MSEs on the EEs of host nations, also highlight several avenues for future research. These directions are crucial for deepening our understanding and addressing the limitations identified in the study. Given below are the future scopes of the present work:

- **Broader sample of MSEs and host countries:** Future studies could expand the sample of MSEs and host countries to enhance the generalizability of the findings. Research incorporating a more diverse range of MSEs, including those with varying scales and in different geographical locations, would provide a more comprehensive picture, as suggested by Preuss (2004).
- **Longitudinal studies:** Given the temporal limitations of this study, longitudinal research would be valuable in understanding the long-term impacts of MSEs on EEs. Such studies could track changes over an extended period, offering insights into the lasting legacies of these events, as highlighted in the work of Matheson (2006).
- **In-depth case studies:** Future research could employ in-depth case studies to explore the nuanced impacts of MSEs on specific aspects of EEs. This approach would allow for a more detailed examination of the mechanisms at play, as recommended by Chalip (2006).
- **Comparative studies between developed and developing countries:** Comparative studies focusing on the differences in impacts between developed and developing countries could provide valuable insights into how different

economic contexts influence the outcomes of MSEs, as discussed by Gratton and Preuss (2008).

- **Integration of qualitative and quantitative data:** Further studies could integrate a mix of qualitative and quantitative data to overcome the limitations associated with relying solely on secondary data. This approach would enable a more holistic understanding of the impacts, as noted by Angrist and Pischke (2009).
- **Interdisciplinary research:** Given the interdisciplinary nature of this topic, future research could benefit from a more integrated approach that combines theories and methods from different fields. This would address the complexities of studying the intersection of MSEs and EEs, as mentioned by Jacobs and Frickel (2009).
- **Policy-focused studies:** Future research could also focus on the policy implications of the findings, examining how governments and stakeholders can effectively leverage MSEs to enhance EEs. This would provide practical guidance for policymakers, as suggested by Isenberg (2010).

In conclusion, these directions for future research would not only address the limitations of the current study but also expand the scope of our understanding of the relationship between MSEs and EEs. Pursuing these avenues would contribute to the growing body of literature on this subject and provide valuable insights for both academics and practitioners in the fields of entrepreneurship and sports event management.

7. CONCLUSION

7.1. Summary

The study systematically investigated the multifaceted relationship between MSEs and EEs, yielding a set of findings that significantly contributes to both academic understanding and practical application. This relationship must be examined by academics, policymakers, and other stakeholders involved in planning, organising, and leveraging these events for long-term economic development. This would allow for a more nuanced understanding of how large-scale sporting events interact with and shape EEs, leading to a better understanding of the phenomenon. The conclusion chapter of this thesis synthesises these findings, reflects on the study's broader implications, and makes recommendations for future research.

The current study investigates the impact of MSEs on EEs in host countries post-award. It looks into various aspects of this impact, such as levels of innovation, entrepreneurial activity, the policy environment, and infrastructure development. This thesis is organised around a set of research questions and hypotheses designed to investigate the complex relationship between MSEs and EEs. These research questions and hypotheses are intended to guide the investigation into how MSEs affect EEs in host countries. The questions were developed with the goal of better understanding the nuances of MSEs' influence on EEs.

The methodology used in this thesis is designed to thoroughly test the proposed hypotheses and provide answers to research questions about the impact of MSEs on EEs. A mixed-methods approach is adopted, which combines quantitative and qualitative research methods to provide a thorough and multifaceted understanding of the topic. A DID regression model and CEM are used in the study's quantitative component, which allows for the evaluation of the impact of MSEs over time while controlling for other external factors. A qualitative approach is also used in the study. This includes examining GEM reports and bid books for references to entrepreneurship or private sector development, as well as conducting interviews with policymakers.

The various hypotheses used in the study and their results indicate that hosting MSEs is associated with improvements in national EE quality under specific conditions of event scale, development, and institutional quality. The patterns align with resource (procurement, infrastructure), legitimacy (attention, signalling), and policy (salience, coordination) channels, and their timing is consistent with staged legacy and capability accumulation (Ritchie, 1984; Gratton & Preuss, 2008; Isenberg, 2010; Stam, 2015; Maennig & Zimbalist, 2012).

The study found that MSEs have a significant and varied impact on EEs in host countries. This impact can be seen in a variety of ways, including improved GEI-determined quality of EEs. The EEs in host nations show significant improvement through the hosting of popular MSEs and the presence of developed economies. MSEs contribute to the EEs in host nations by favouring enhanced levels of innovation and entrepreneurial activities, the rule of law, and infrastructure. This study's findings complement and extend existing literature on the socioeconomic impacts of MSEs (Preuss, 2004; Matheson, 2006) and the dynamic nature of EEs (Stam, 2015; Acs, Autio, & Szerb, 2014).

The study also highlights the significance of MSEs in reshaping structural and functional aspects of EEs, such as innovation, policy environment, and entrepreneurial culture. The study emphasises that MSEs help host countries integrate into global economic, social, and political dimensions, which improves our understanding of EEs as open systems. This integration is consistent with assertions by Isenberg (2010) about the impact of external factors on the global connectivity of EEs, emphasising the role of MSEs in expanding the reach and scope of entrepreneurial networks. The study demonstrates the variability of event impacts and their dependence on the scale of the event and the host nation's development status. This sheds light on the contextual nature of EEs. The popularity of MSEs frequently has an impact on the host countries. Popular MSEs have a greater positive impact on the EE because of their higher visitor draw, international appeal, and infrastructure investments. On the other hand, developed countries derive a

more positive impact on EEs after MSE awards because they can boost entrepreneurship and capitalise on opportunities. In comparison to their developing counterparts, the developed nations experience more favourable capital opportunity costs and less criticism from local communities for misappropriation of funds.

In conclusion, this study has shed light on the significant yet nuanced role of MSEs in shaping host countries' entrepreneurial landscapes. It adds to the growing body of knowledge that bridges entrepreneurship and event management by providing both theoretical insights and practical guidance for maximising the full potential of MSEs in fostering vibrant and sustainable EEs. Stepping back from the specifics, the study reframes mega-events as ecosystem interventions that reshape entrepreneurial contexts through interacting resource, legitimacy, and policy channels, contingent on scale and institutions (Isenberg, 2010; Stam & Van de Ven, 2021; Müller, 2015).

7.2. Limitations

While this study provides useful insights into the effects of MSEs on EEs, it is important to recognise its limitations. These limitations are inherent in the research design and methodology and should be taken into account when interpreting the results. The study focuses on a selected number of MSEs and host countries, which may limit the generalizability of the findings. According to studies such as Preuss (2004) and Matheson (2006), the unique economic, cultural, and political contexts of these countries may influence outcomes. For quantitative analysis, the study relies heavily on secondary data sources. While these sources are trustworthy, they may contain biases or inaccuracies that may affect the results.

The study's reliance on existing databases also limits the ability to control for all potential confounding variables, a limitation noted in economic impact studies (Baade & Matheson, 2004). Furthermore, the study has some methodological constraints. For example, the dynamic DID regression model, while robust, has its

limitations. The model assumes that the treatment and control groups would have followed parallel paths in the absence of the treatment (MSE award), a condition that may not always hold true, as highlighted by Angrist and Pischke (2009).

Furthermore, there are limitations associated with the study's qualitative analysis. The qualitative component, which includes interviews, may be biased due to self-reporting bias and interviewer bias. Despite efforts to mitigate these through careful interview design and analysis, Miles, Huberman, and Saldaa (2014) discuss how they remain inherent in qualitative research. The temporal scope of the study may not capture the long-term effects of MSEs on EEs. According to Chalip (2006), some effects, particularly those related to cultural and policy changes, may manifest beyond the timeframe of the study. In addition, while the current study's interdisciplinary nature is a strength, it also poses challenges in integrating theories and methods from various fields. This integration may overlook nuances unique to each discipline, a complication recognised in interdisciplinary research (Jacobs & Frickel, 2009). In summary, these limitations emphasise the importance of cautious interpretation of the findings and suggest areas for future research. Addressing these limitations in future research could lead to a more complete understanding of the effects of MSEs on EEs.

The study also acknowledges its limitations, such as the difficulties with generalizability and the reliance on secondary data. These limitations open up possibilities for future research, indicating the need for more diverse and long-term studies to validate and expand on the findings presented here. Despite its limitations, the current study adds significantly to EE theory by emphasising the multifaceted effects of MSEs. The findings contribute to a better understanding of EEs and lay the groundwork for future research into the complex interplay between events and entrepreneurial activities. This study not only supports but also extends existing theoretical frameworks on the economic and social impacts of MSEs by focusing on their specific impacts on EEs.

The findings provide a more refined understanding of EEs, and offer a foundation for future research exploring the complex interplay between events and entrepreneurial activities. This research not only supports existing theoretical frameworks on the economic and social impacts of MSEs, but also extends these frameworks by focusing on their specific impacts on EEs. The findings provide a more comprehensive understanding of the role of MSEs in shaping entrepreneurial landscapes, offering valuable insights for future research in the domains of entrepreneurship, sports event management, and the development of a host city or nation.

To conclude, limitations may be grouped as follows. Data: GEI coverage and window constraints (Ács, Szerb, & Autio, 2017). Model: DID assumptions and small-sample inference (Angrist & Pischke, 2009; Callaway & Sant'Anna, 2021). Scope: generalisability beyond the studied events/countries (Preuss, 2004; Gratton & Preuss, 2008). Interpretive caution: findings should be read as associations, not proof of causal mechanisms.

7.3. Recommendations and future research

In terms of practical implications, this research offers valuable insights for policymakers and event organisers. The findings underscore the importance of strategic planning and policy formulation that leverage the potential of MSEs to bolster EEs. This aligns with the recommendations of Isenberg (2010) and others, who advocate for policies that enhance innovation and entrepreneurship in the context of large-scale events. Finally, this thesis calls for continued interdisciplinary research in this area. The complex interplay between MSEs and EEs spans multiple fields, and a comprehensive understanding of this relationship requires integrating perspectives from economics, urban planning, sociology, and sports management.

This research explores the relationship between MSEs and EEs, providing valuable insights for the organisation and impact assessment of MSEs. The study's

theoretical underpinnings and empirical findings contribute to existing knowledge in entrepreneurship and can inform policy and decision-making processes for stakeholders involved in MSEs. It provides strategic insights into how MSEs can boost and sustain healthy EEs, contributing to economic and social development in host countries. The policy implications of this study are expected to provide actionable recommendations, guiding policymakers to maximise benefits while minimising adverse effects. The study reveals a dynamic relationship between MSEs and EEs, enriching theoretical discourse and providing practical implications for fostering long-term EEs in large-scale sporting events. Understanding the nuanced impacts of MSEs on EEs can inform strategic planning and decision-making for policymakers and stakeholders involved in hosting MSEs. The study emphasises the importance of collaboration between various sectors, including government, private entities, and civil society, to maximise the entrepreneurial benefits of MSEs. The thesis calls for continued interdisciplinary research in this area, as the complex interplay between MSEs and EEs spans multiple fields.

Several areas for improvement and actionable recommendations have been identified by policymakers to leverage MSEs for boosting EEs in host countries. They emphasise the importance of ongoing support for entrepreneurs as well as the use of event-developed tools to create a lasting legacy and support local business innovation. They also propose mechanisms for equitable benefit distribution, ensuring that their impact is not limited to government connections. Additionally, they emphasise the importance of local market players and capacity building, as well as prioritising local suppliers and developing industry-specific strategies. They further suggest better payment and contract management to avoid negative market impacts. Finally, they emphasise the significance of planning for the post-event sustainability of the EE. These findings offer valuable lessons for future MSE hosts, emphasising the need for planning for legacy, supporting local entrepreneurs, ensuring event benefits are widely distributed, focusing on the local market, effectively managing contracts and payments, and planning for legacy and

sustainability. Extant research may analyse the immediate economic effects of MSEs. However, a deeper understanding of the long-term influence of MSEs on the EE is lacking.

8. CONCLUSIÓN

8.1. Resumen

El estudio analiza de manera sistemática la relación multifacética entre los MSE y los EE, y genera un conjunto de hallazgos que contribuyen de forma sustantiva tanto a la comprensión académica del fenómeno como a su aplicación práctica. Esta relación requiere ser examinada por la comunidad académica, los responsables de políticas públicas y otros agentes implicados en la planificación, organización y aprovechamiento de estos eventos como instrumentos de desarrollo económico a largo plazo. Tal enfoque permitiría una comprensión más matizada de cómo los eventos deportivos de gran escala interactúan con los EE y los configuran, de tal forma que se proporcione una visión más profunda del fenómeno. El capítulo de conclusiones de esta tesis sintetiza dichos hallazgos, reflexiona sobre las implicaciones más amplias del estudio y propone recomendaciones para futuras investigaciones.

El estudio analiza el impacto de los MSE en los EE de los países anfitriones tras la adjudicación con un examen de aspectos como la innovación, la actividad emprendedora, el entorno normativo y el desarrollo de infraestructuras. La tesis se organiza en torno a preguntas e hipótesis destinadas a estudiar la compleja relación entre MSE y EE.

La metodología aplicada en esta tesis se ha concebido para poner a prueba de manera rigurosa las hipótesis planteadas y responder a las preguntas de investigación relativas al impacto de los MSE en los EE. Se adopta un enfoque de métodos mixtos que integra herramientas cuantitativas y cualitativas al objeto de ofrecer una comprensión exhaustiva y multidimensional del fenómeno. En el componente cuantitativo se emplea un modelo de regresión DID junto con el emparejamiento exacto aproximado (CEM), lo que permite evaluar el impacto de los MSE a lo largo del tiempo controlando los factores externos. El componente

cualitativo del estudio incluye el análisis de los informes GEM y los libros de candidatura en busca de referencias al emprendimiento o al desarrollo del sector privado, así como la realización de entrevistas con responsables políticos.

Las distintas hipótesis planteadas en el estudio y sus resultados muestran que la organización de MSE se asocia con mejoras en la calidad del EE nacional, bajo condiciones específicas relacionadas con la escala del evento, el nivel de desarrollo y la calidad institucional. Los patrones observados se corresponden con los canales de recursos (contratación, infraestructuras), legitimidad (atención, señalización) y políticas (relevancia, coordinación), cuya secuencia temporal resulta coherente con un legado progresivo y con la acumulación de capacidades (Ritchie, 1984; Gratton y Preuss, 2008; Isenberg, 2010; Stam, 2015; Maennig y Zimbalist, 2012).

El estudio revela que los MSE tienen un impacto significativo y heterogéneo en los EE de los países anfitriones, observable —entre otros aspectos— en la mejora del GEI. Los EE de los países anfitriones muestran mejoras particularmente cuando se trata de MSE populares y economías desarrolladas. Los MSE contribuyen a elevar los niveles de innovación y actividad emprendedora y a reforzar el estado de derecho y las infraestructuras. Estas conclusiones complementan y amplían la literatura sobre impactos socioeconómicos de los MSE (Preuss, 2004; Matheson, 2006) y sobre la naturaleza dinámica de los EE (Stam, 2015; Ács, Autio y Szerb, 2014).

El estudio subraya asimismo la relevancia de los MSE en la transformación de los aspectos estructurales y funcionales de los EE, como la innovación, el entorno normativo y la cultura emprendedora. Se destaca que los MSE facilitan la integración de los países anfitriones en las dimensiones económicas, sociales y políticas globales, lo que contribuye a una mejor comprensión de los EE como sistemas abiertos. Esta integración concuerda con las afirmaciones de Isenberg (2010) sobre la influencia de los factores externos en la conectividad global de los EE, y pone de manifiesto el papel de los MSE en la ampliación del alcance y la

proyección de las redes emprendedoras. El estudio demuestra la variabilidad de los impactos de los eventos y su dependencia tanto de la escala del evento como del grado de desarrollo del país anfitrión, lo que evidencia la naturaleza contextual de los EE. La popularidad de los MSE suele repercutir de manera significativa en los países anfitriones: los eventos más populares generan un impacto más positivo sobre el EE gracias a su mayor capacidad de atracción, su visibilidad internacional y sus inversiones en infraestructura. A su vez, los países desarrollados obtienen un impacto más favorable en los EE tras la adjudicación de MSE, al poder dinamizar el emprendimiento y aprovechar mejor las oportunidades. En comparación con los países en desarrollo, las naciones desarrolladas afrontan costes de oportunidad de capital más favorables y menores críticas sociales por presunta mala gestión de los fondos públicos.

En conclusión, este estudio arroja luz sobre el papel significativo —aunque matizado— de los MSE en la configuración del panorama emprendedor de los países anfitriones. Aporta tanto ideas teóricas como orientación práctica para maximizar el potencial de los MSE en el fomento de EE dinámicos y sostenibles. En un plano más general, el estudio replantea los megaeventos como intervenciones ecosistémicas que reconfiguran los contextos emprendedores mediante la interacción de canales de recursos, legitimidad y políticas, en función de la escala y de las instituciones (Isenberg, 2010; Stam y Van de Ven, 2021; Müller, 2015).

8.2. Limitaciones

Si bien este estudio aporta información útil sobre los efectos de los MSE en los EE, es importante reconocer sus limitaciones. Estas derivan del diseño y la metodología, y deben tomarse en consideración al interpretar los resultados. El estudio se centra en un número acotado de MSE y países anfitriones, lo que puede limitar la generalización. Según Preuss (2004) y Matheson (2006), los contextos económicos, culturales y políticos específicos pueden influir en los resultados. En el análisis

cuantitativo, el estudio depende en gran medida de datos secundarios: si bien son fiables, pueden contener sesgos o inexactitudes.

La dependencia de bases de datos existentes limita además la capacidad de controlar todas las posibles variables de confusión, una limitación ya señalada en estudios de impacto económico (Baade y Matheson, 2004). Asimismo, el estudio presenta determinadas limitaciones metodológicas. Por ejemplo, aunque el modelo de regresión dinámica de diferencias en diferencias (DID) se considera robusto, no está exento de limitaciones. Dicho modelo asume que los grupos de tratamiento y de control habrían seguido trayectorias paralelas en ausencia del tratamiento (la adjudicación del MSE), una condición que, como señalan Angrist y Pischke (2009), no siempre se cumple en la práctica.

También existen limitaciones vinculadas al análisis cualitativo. El componente cualitativo, que incluye entrevistas, puede presentar sesgos derivados del autoinforme o del propio entrevistador. Aunque se procuró reducirlos mediante un diseño y un análisis cuidadosos de las entrevistas, Miles, Huberman y Saldaa (2014) advierten de que dichos sesgos son inherentes a la investigación cualitativa. El marco temporal del estudio podría no reflejar los efectos a largo plazo de los MSE sobre los EE. Según Chalip (2006), algunos impactos —en particular los vinculados a transformaciones culturales o políticas— pueden manifestarse más allá del periodo analizado. Asimismo, aunque la naturaleza interdisciplinar de este estudio constituye una fortaleza, también conlleva dificultades a la hora de integrar teorías y métodos procedentes de distintas disciplinas. Dicha integración puede obviar matices específicos de cada ámbito, una limitación reconocida en la investigación interdisciplinar (Jacobs y Frickel, 2009). En conjunto, estas limitaciones subrayan la necesidad de interpretar los resultados con cautela y apuntan a posibles líneas de investigación futura. Superarlas en estudios posteriores podría ofrecer una comprensión más integral de los efectos de los MSE en los EE.

El estudio reconoce asimismo sus limitaciones, entre ellas las dificultades de generalización y la dependencia de datos secundarios. Dichas limitaciones abren nuevas posibilidades de investigación, al poner de manifiesto la necesidad de estudios más diversos y de mayor duración que permitan validar y ampliar los resultados aquí expuestos. No obstante, pese a sus limitaciones, el presente trabajo aporta de forma significativa a la teoría de los EE, al destacar los efectos multifacéticos de los MSE. Los resultados contribuyen a una comprensión más profunda de los EE y establecen las bases para futuras investigaciones sobre la compleja interacción entre los eventos y la actividad emprendedora. Este estudio no solo corrobora, sino que también amplía los marcos teóricos existentes acerca de los impactos económicos y sociales de los MSE, al centrarse en sus repercusiones específicas sobre los EE.

Los resultados de este estudio aportan una comprensión más matizada de los ecosistemas emprendedores (EE) y establecen una base sólida para futuras investigaciones destinadas a explorar la compleja interacción entre los eventos y las dinámicas emprendedoras. Esta investigación no solo respalda los marcos teóricos existentes sobre los impactos económicos y sociales de los megaeventos deportivos (MSE), sino que también los amplía al centrarse en sus efectos específicos sobre los EE. Los hallazgos proporcionan una visión más integral del papel que desempeñan los MSE en la configuración de los ecosistemas emprendedores y ofrecen aportaciones de valor para la investigación futura en los ámbitos del emprendimiento, la gestión de eventos deportivos y el desarrollo de las ciudades y naciones anfitrionas

En conclusión, las limitaciones pueden agruparse del modo siguiente. Datos: cobertura del GEI y restricciones temporales (Ács, Szerb y Autio, 2017). Modelo: supuestos del DID e inferencia con muestras pequeñas (Angrist y Pischke, 2009; Callaway y Sant'Anna, 2021). Alcance: generalización más allá de los eventos y países estudiados (Preuss, 2004; Gratton y Preuss, 2008). Precaución

interpretativa: los resultados deben leerse como asociaciones, no como pruebas de mecanismos causales.

8.3. Recomendaciones e investigaciones futuras

En cuanto a las implicaciones prácticas, esta investigación aporta información valiosa para los responsables de la formulación de políticas y los organizadores de eventos. Los resultados ponen de relieve la importancia de la planificación estratégica y del diseño de políticas que permitan aprovechar el potencial de los MSE para fortalecer los EE. Ello se alinea con las recomendaciones de Isenberg (2010) y otros autores, quienes defienden la adopción de políticas orientadas a fomentar la innovación y el emprendimiento en el contexto de eventos de gran escala. Finalmente, esta tesis plantea la necesidad de continuar promoviendo la investigación interdisciplinaria en este ámbito. La compleja interacción entre los MSE y los EE trasciende múltiples disciplinas, por lo que alcanzar una comprensión integral de esta relación exige integrar perspectivas procedentes de la economía, la planificación urbana, la sociología y la gestión del deporte.

Esta investigación explora la relación entre los MSE y los EE, y aporta conocimientos de gran valor para la organización y la evaluación del impacto de los MSE. Los fundamentos teóricos y los hallazgos empíricos del estudio contribuyen al conocimiento existente sobre el emprendimiento y pueden servir de base para los procesos de formulación de políticas y de toma de decisiones de las partes interesadas implicadas en los MSE. El estudio ofrece perspectivas estratégicas sobre cómo los MSE pueden impulsar y mantener ecosistemas emprendedores saludables, lo que contribuye al desarrollo económico y social de los países anfitriones. Se espera que las implicaciones políticas de este estudio proporcionen recomendaciones prácticas que orienten a los responsables políticos para maximizar los beneficios y minimizar los efectos adversos. El estudio revela una relación dinámica entre los MSE y los EE que enriquece el discurso teórico y aporta implicaciones prácticas para fomentar ecosistemas emprendedores a largo plazo en

los eventos deportivos de gran escala. Comprender los matices del impacto de los MSE en los EE puede servir de base para la planificación estratégica y la toma de decisiones de los responsables políticos y las partes interesadas que participan en la organización de MSE. El estudio enfatiza la importancia de la colaboración entre los diversos sectores —incluidos el gobierno, las entidades privadas y la sociedad civil— para maximizar los beneficios empresariales de los MSE. La tesis aboga por la continuación de la investigación interdisciplinaria en este ámbito, dado que la compleja interacción entre los MSE y los EE abarca múltiples campos.

Los responsables de políticas públicas han identificado diversas áreas de mejora y formulado recomendaciones concretas orientadas a aprovechar los megaeventos deportivos (MSE) para fortalecer los ecosistemas emprendedores (EE) en los países anfitriones. Subrayan la importancia de ofrecer un apoyo continuo a los emprendedores y de emplear las herramientas desarrolladas durante la organización de los eventos para generar un legado duradero y promover la innovación empresarial local. Asimismo, proponen establecer mecanismos que garanticen una distribución equitativa de los beneficios para evitar que su impacto quede restringido a las redes gubernamentales. Del mismo modo, destacan la relevancia de los actores del mercado local y del desarrollo de capacidades, junto con la priorización de los proveedores nacionales y el diseño de estrategias específicas para cada sector. Además, sugieren optimizar la gestión de los pagos y los contratos con el fin de prevenir efectos negativos en el mercado. Finalmente, ponen de relieve la necesidad de planificar la sostenibilidad del EE una vez concluido el evento. Estos hallazgos proporcionan lecciones de gran valor para futuros países anfitriones de MSE, al destacar la importancia de planificar el legado, respaldar a los emprendedores locales, asegurar una distribución equitativa de los beneficios, fortalecer el tejido empresarial local, gestionar eficazmente los contratos y los pagos, y garantizar la sostenibilidad a largo plazo. Si bien la investigación existente se ha centrado principalmente en los efectos económicos inmediatos de

los MSE, persiste una limitada comprensión de su influencia a largo plazo sobre los EE.

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APPENDIX 1: FIGURES AND TABLES

The screenshot shows the Mendeley Desktop interface with a search result. The document preview contains the following text:

that inefficient government bureaucracy remains one of the major obstacles to entrepreneurial activity and business growth in the country. Government bureaucracy also featured strongly in the 2015/16 Global Competitiveness Report's list of most problematic factors for doing business in South Africa (in second position, up from third position in 2014/15). The experts gave strongly negative ratings (under 4) for the time required to obtain permits and licences, as well as the ease of coping with government bureaucracy and regulations, highlighting the red tape associated with starting up and managing a business. As one expert commented, "The red tape is appalling and blocks a lot of entrepreneurial initiatives - when it takes six months to set up a limited liability private company, you know things are pretty hopeless." One expert cited the proposed business licensing legislation. "The practicalities of its implementation and enforcement," he argues, "makes one wonder whether the drafters have any understanding of the business landscape. If Johannesburg, for example, is unable to generate timely and accurate rate

indicates that reform in the area of government bureaucracy is long overdue. Overall, in 2015/16 Mauritius was ranked 32nd out of 189 countries for ease of starting a business, while South Africa was ranked 73rd. Both Rwanda (62nd) and Botswana (72nd) are ranked above South Africa in terms of ease of doing business. In 2015, South Africa was ranked 43rd out of 189 countries, highlighting the significant decline in ease of doing business in this country.³

After some easing of the regulations associated with starting a business between 2007 and 2010 (possibly as a result of South Africa hosting the FIFA Soccer World Cup), South Africa has regressed in this area (Table 3.4). In terms of starting a business, South Africa is ranked 120th in 2016 - an alarming slump of almost 60 positions from 2015 (when South Africa was ranked 61st) - while Mauritius is ranked 37th. The time taken to complete the procedures necessary to start a business in South Africa has more than doubled since 2015 - a shocking indictment of government inefficiency and bureaucracy at a time when stimulating the SME sector is so critical to South Africa's growth prospects. In Mauritius (Africa's top performer in Going Business 2016, as well as in the Global Competitiveness Report 2015/16), by contrast,

Table 3.4: Starting a business in South Africa - procedures and days

Year	2007	2010	2015	2016	SSA average, 2016
Days	120	120	61	120	120

The right-hand sidebar shows the document's metadata, including the title "Global Entrepreneurship Monitor Is South Africa heading for an economic...", the year "2016", and the author "Global Entrepreneurship Monitor".

Figure 1: Searching in Mendeley desktop program

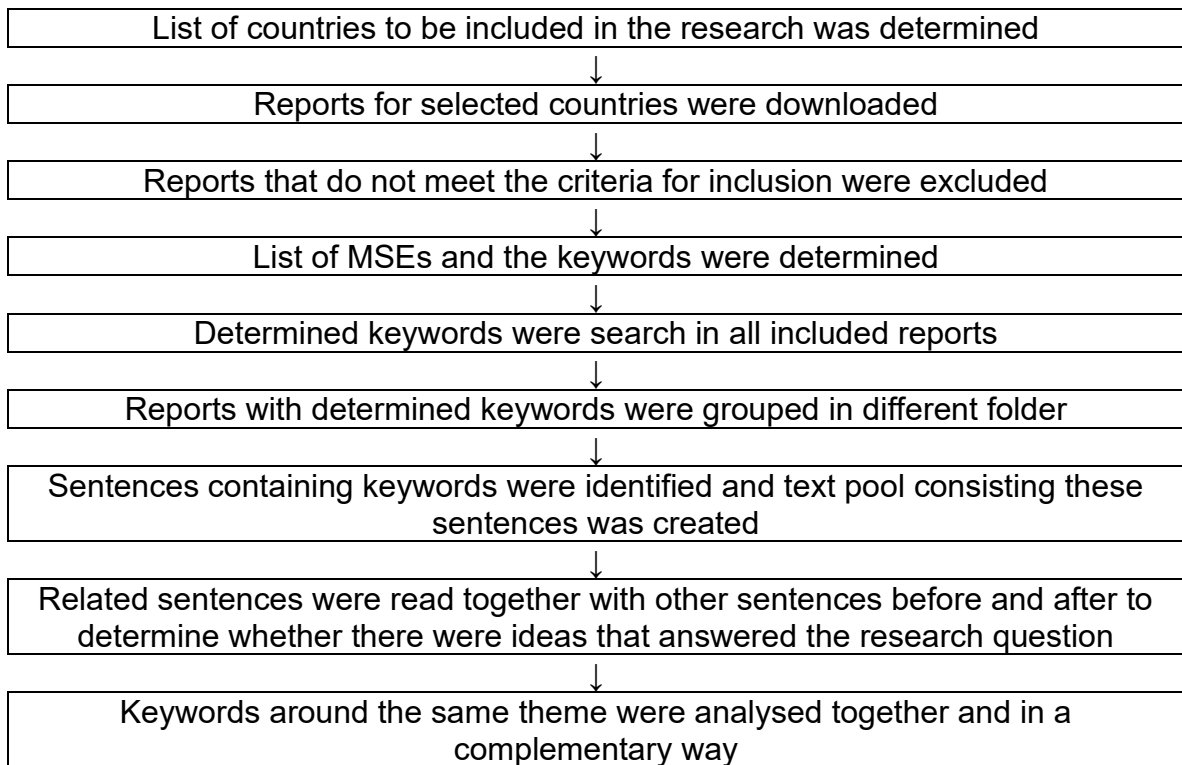


Figure 3: Flowchart showing procedures adopted for review of GEM reports

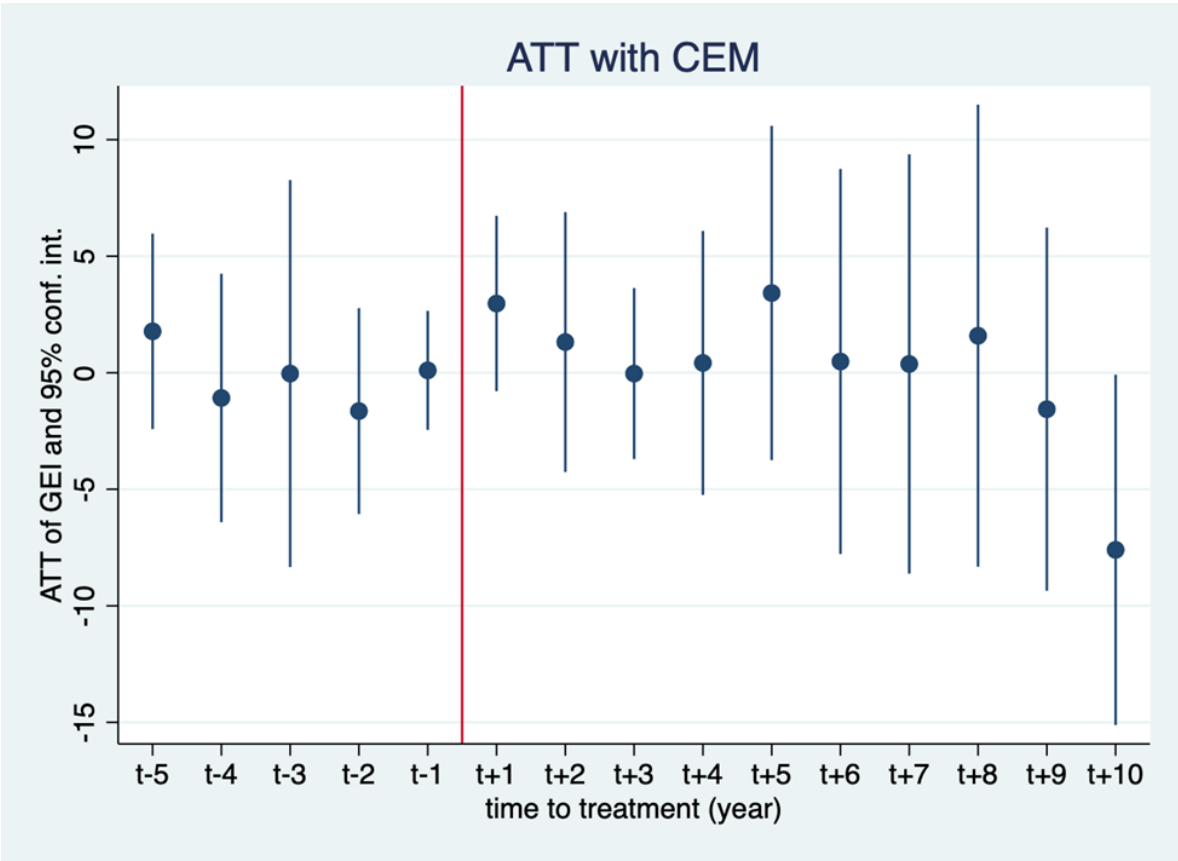


Figure 4: DID estimated coefficient plot with GEI as DV

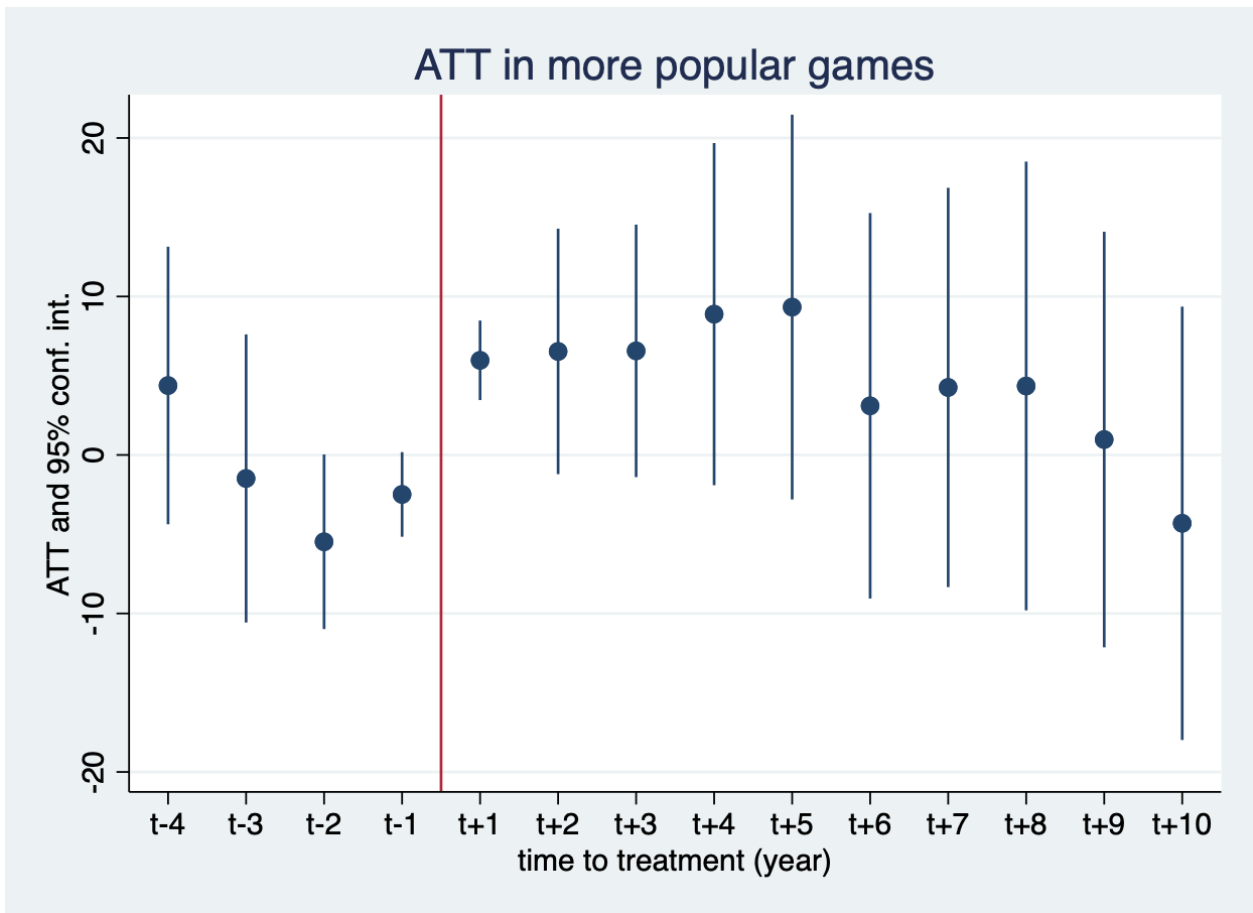


Figure 5: DID estimated coefficient plot with GEI as DV for more popular games

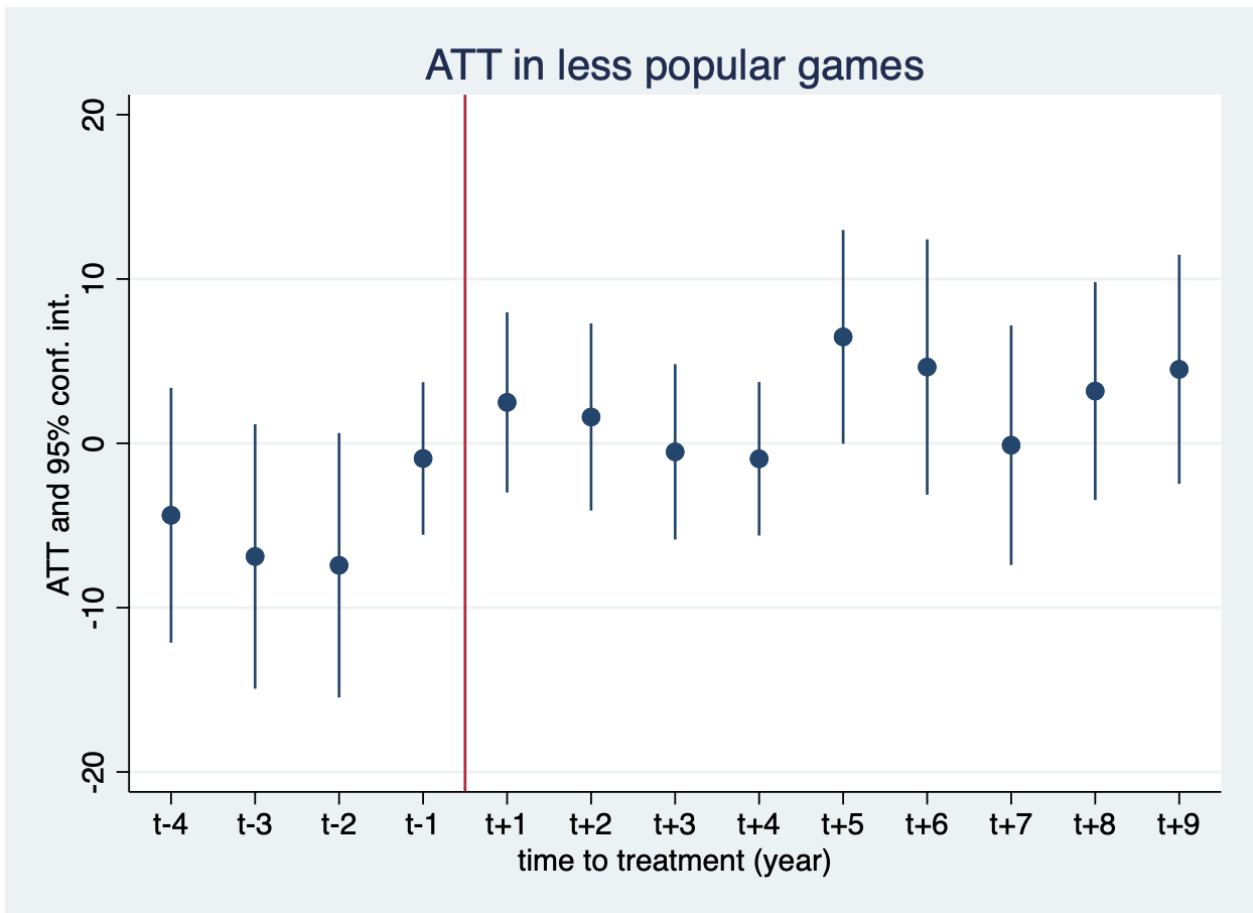


Figure 6: DID estimated coefficient plot with GEI as DV for less popular games

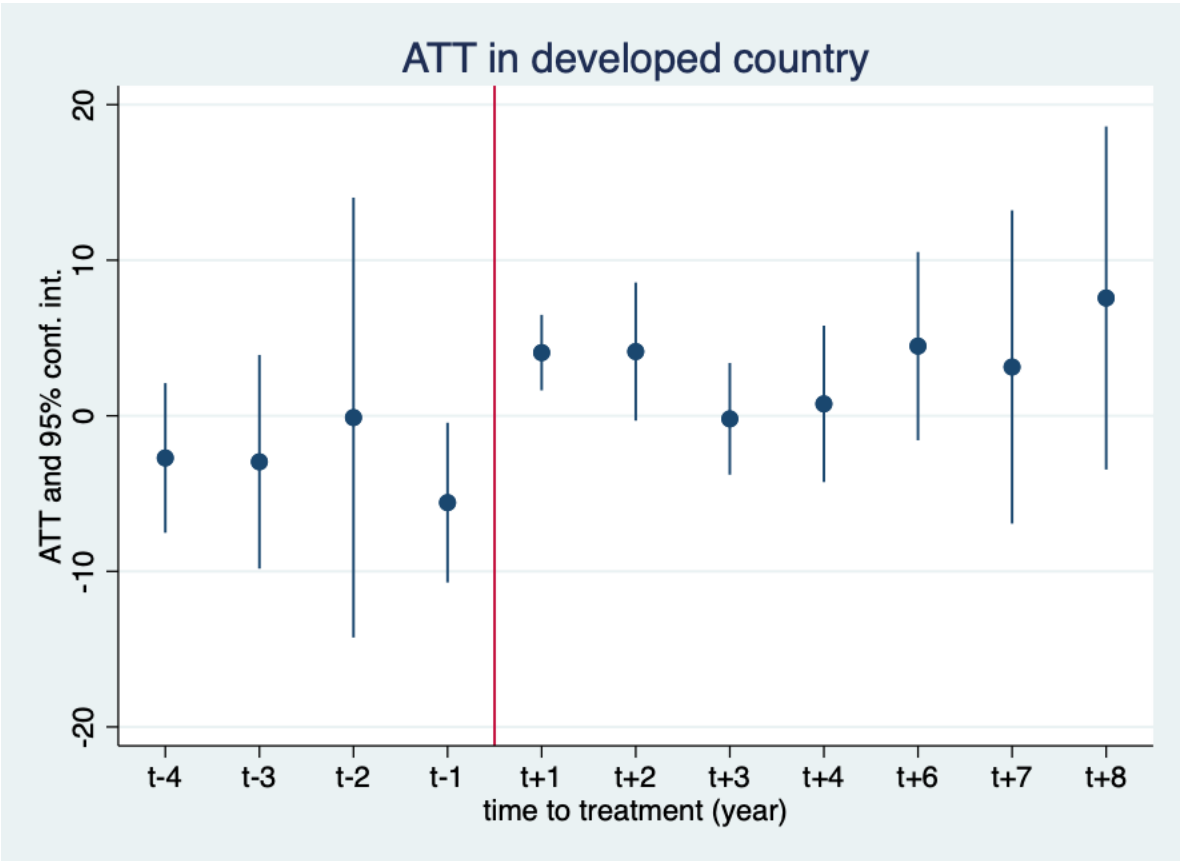


Figure 7: DID estimated coefficient plot with GEI as DV for developed countries

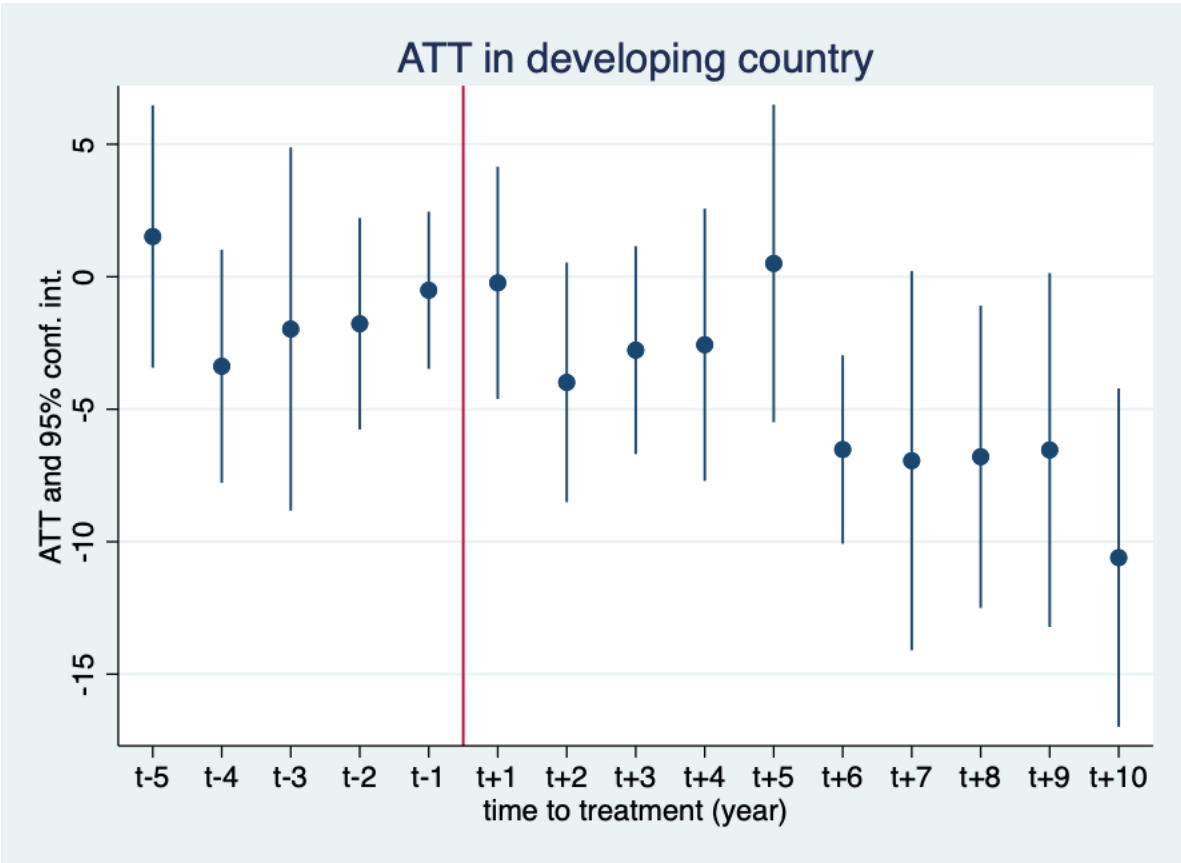


Figure 8: DID estimated coefficient plot with GEI as DV for developing countries

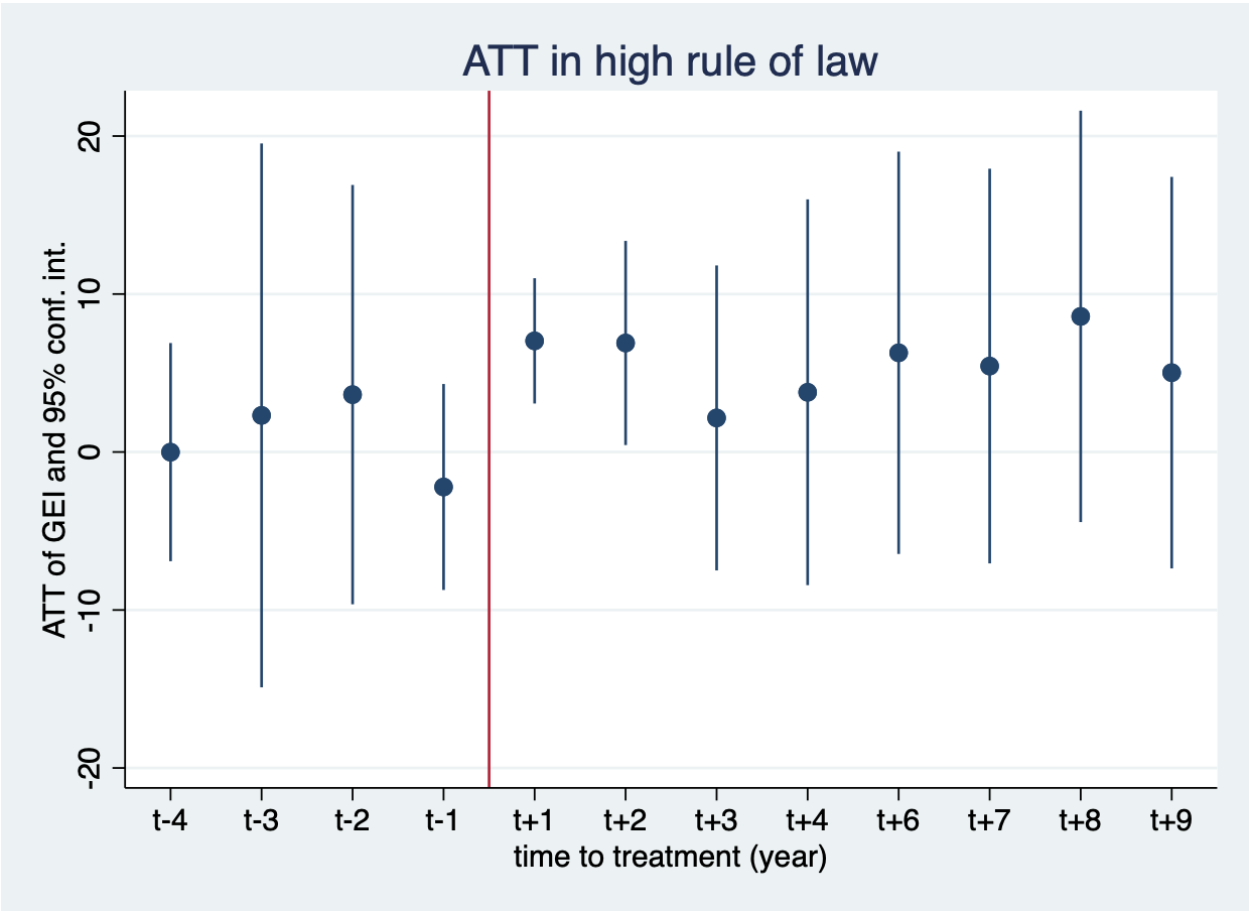


Figure 9: DID estimated coefficient plot for countries with high rule of law

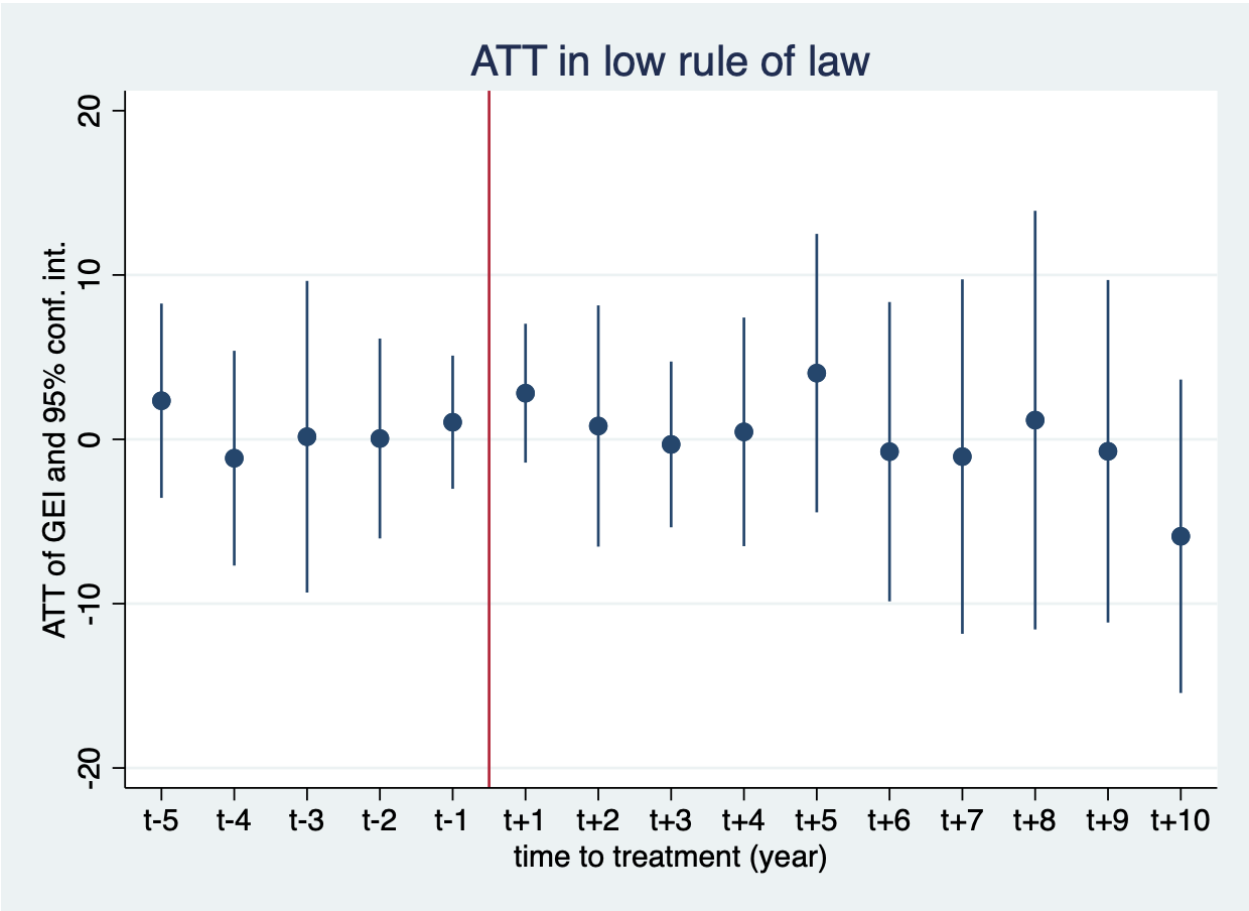


Figure 10: DID estimated coefficient plot for countries with low rule of law

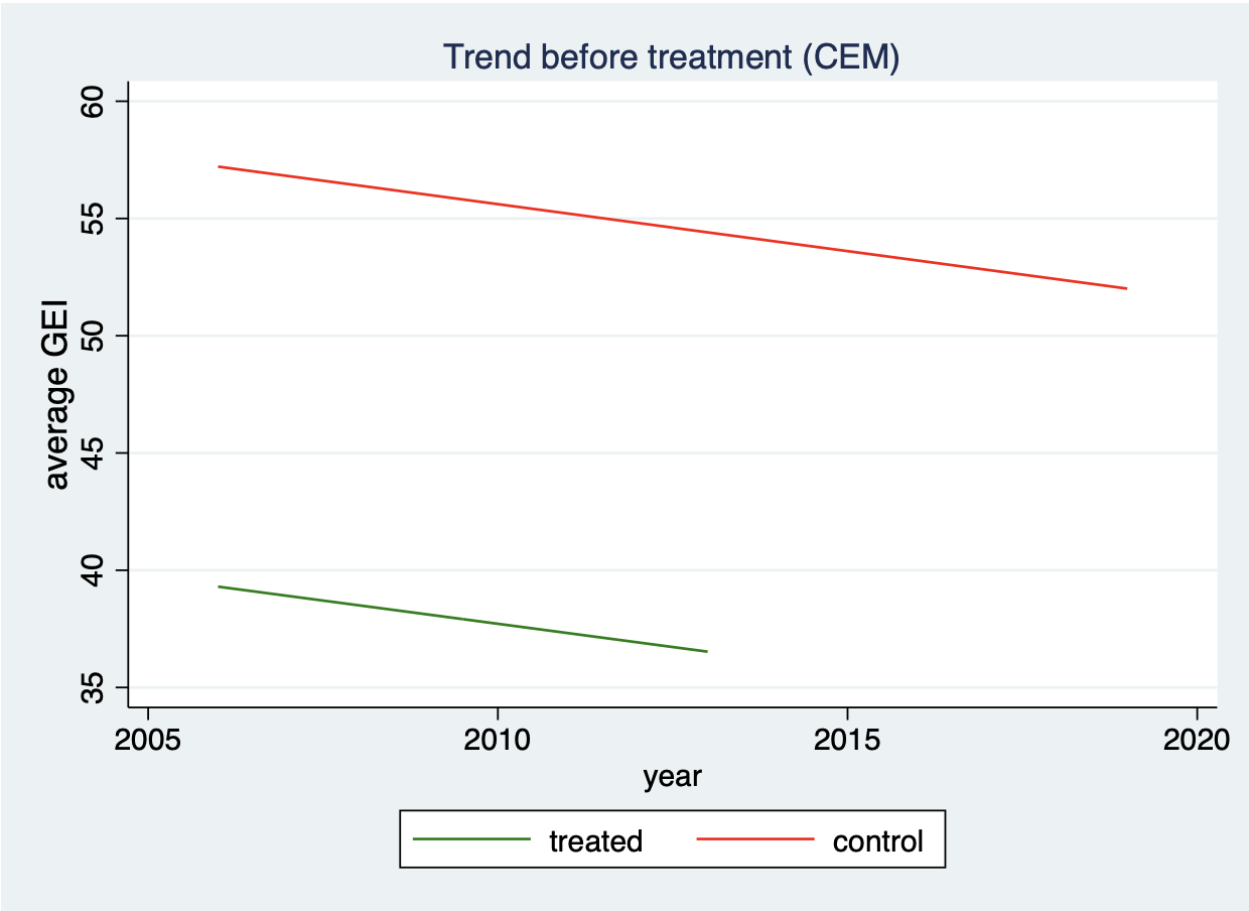


Figure 11: Trend analysis before the treatment year (parallel trend)

Table 12: Summary Statistics

	N	Mean	min	max	Std. Dev.	Skewness	kurtosis
GEI	204	50.227	16.100	86.8	18.248	-.117	1.996
Corruption	204	.779	-1.141	2.159	.923	-.481	2.004
log FDI	204	26.681	8.455	27.722	1.298	-13.649	192.257
log Trade	196	27.232	0.000	27.726	2.026	-12.566	168.276
log Net IP	177	24.213	0.000	25.455	1.861	-12.522	163.623
Reg. Quality	204	.883	-0.653	2.045	.713	-.538	2.168

Table 13: Univariate imbalance measures before CEM

	L1	Mean	min	25%	50%	75%	max
Corruptio	0.5121	-1.0786	0.0420	-1.1783	-1.4748	-1.1608	-0.6217
n	2		9				
log FDI	0.2732	0.0373	18.17	0.0019	-0.3072	-	-
	3	6		3		0.11306	0.8591
							2
log Trade	0.0606	0.3742	27.385	-	0.0145	-	-0.0448
	1	9		0.0015	2	0.0091	
				7		3	
log Net IP	0.4363	-	24.02	-	-	-0.2431	-1.0563
	6	0.0379		0.0899	0.0955		
		9		1	1		
Reg.	0.5919	-	-	-1.0739	-1.1392	-0.5251	-
quality	2	0.8230	0.1637				0.6067
		1	6				2

Table 14: Univariate imbalance measures after CEM

	L1	Mean	min	25%	50%	75%	max
Corruption	0.0731 7	0.0544 3	0.0420 9	0.0624 4	- 0.0974 4	- 0.0935 7	-0.1527
log FDI	0.1550 4	0.0037 5	0.1375 7	0.0161 3	0.0237 8	0.0599 6	- 0.6536 5
log Trade	0.0528 5	0.0623	3.0489	- 0.0036 1	0.0133 6	- 0.0107 4	0.0528 3
log Net IP	0.0938 1	- 0.11224	- 0.0588 5	- 0.0861 2	- 0.0702 6	- 0.0221 9	-1.0563
Reg. quality	0.0447 2	- 0.0142 8	- 0.1637 6	- 0.1571 9	- 0.0124 7	0.0196 3	- 0.1806 1

GEI Statistics	Treated		Control	
	Before	After	Before	After
N	61	57	143	56
Mean	37.456	36.883	55.675	54.197
Min	16.1	16.1	22.043	36.244
Max	68.508	68.508	86.8	83.614
St. Dev.	17.908	18.08	15.51	13.606
Skewness	0.517	0.608	-0.072	0.831
Kurtosis	1.543	1.627	2.272	2.503

Table 15: Linear regression dynamic DID regression with GEI as the DV

GEI	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Treatment lead (t – 5)	1.776	1.904	0.93	0.371	-2.415	5.968	
Treatment lead (t – 4)	-1.082	2.422	-0.45	0.664	-6.412	4.248	
Treatment lead (t – 3)	-0.036	3.772	-0.01	0.993	-8.338	8.266	
Treatment lead (t – 2)	-1.645	2.008	-0.82	0.430	-6.064	2.774	
Treatment lead (t – 1)	0.101	1.161	0.09	0.932	-2.454	2.656	
Treatment effect (t + 1)	2.970	1.710	1.74	0.110	-0.794	6.733	
Treatment effect (t + 2)	1.316	2.534	0.52	0.614	-4.260	6.893	
Treatment effect (t + 3)	-0.036	1.667	-0.02	0.983	-3.704	3.633	
Treatment effect (t + 4)	0.421	2.574	0.16	0.873	-5.243	6.085	
Treatment effect (t + 5)	3.419	3.258	1.05	0.317	-3.752	10.590	
Treatment effect (t + 6)	0.482	3.754	0.13	0.900	-7.780	8.744	
Treatment effect (t + 7)	0.376	4.087	0.09	0.928	-8.619	9.371	
Treatment effect (t + 8)	1.589	4.504	0.35	0.731	-8.325	11.502	
Treatment effect (t + 9)	-1.565	3.539	-0.44	0.667	-9.355	6.226	
Treatment effect (t + 10)	-7.599	3.415	-2.23	0.048	-15.116	-0.082	**
12b	0	.	.	.	.	.
Brazil	-43.457	2.184	-19.90	0.000	-48.263	-38.651	***
France	-0.122	2.246	-0.05	0.958	-5.066	4.822	
Indonesia	-44.370	1.356	-32.73	0.000	-47.353	-41.386	***
Italy	-24.191	0.386	-62.73	0.000	-25.040	-23.343	***
Japan	-14.382	0.857	-16.78	0.000	-16.269	-12.495	***
Portugal	-14.625	2.172	-6.73	0.000	-19.405	-9.845	***
Spain	-22.499	1.418	-15.87	0.000	-25.619	-19.378	***

GEI	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Turkey	-39.769	2.240	-17.75	0.000	-44.700	-34.838	***
United States	-20.162	1.805	-11.17	0.000	-24.133	-16.190	***
Korea	-21.502	1.404	-15.32	0.000	-24.591	-18.413	***
Russia	16.338	0.356	45.93	0.000	15.555	17.121	***
2006b	0	.	.	.	.	.
2007	-1.525	2.293	-0.67	.52	-6.572	3.521	
2008	-.213	1.505	-0.14	.89	-3.525	3.098	
2009	-2.497	1.739	-1.44	.179	-6.323	1.33	
2010	-3.941	1.524	-2.59	.025	-7.294	-.588	**
2011	-5.974	1.463	-4.08	.002	-9.194	-2.755	***
2012	-4.141	1.004	-4.12	.002	-6.351	-1.93	***
2013	-3.447	1.413	-2.44	.033	-6.557	-.338	**
2014	-3.734	1.842	-2.03	.068	-7.788	.32	*
2015	-2.643	2.369	-1.12	.288	-7.857	2.571	
2016	-1.712	2.128	-0.80	.438	-6.397	2.972	
2017	-2.803	2.22	-1.26	.233	-7.688	2.082	
2018	-1.323	2.045	-0.65	.531	-5.823	3.178	
2019	-.13	2.578	-0.05	.961	-5.803	5.544	
Constant	67.286	.869	77.43	0	65.373	69.198	***
Mean dependent var	45.463		SD dependent var	18.165			
R-squared	0.990		Number of obs	113			
F-test	.		Prob > F	.			
Akaike crit. (AIC)	468.955		Bayesian crit. (BIC)	498.956			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 16: Dynamic DID regression with GEI as the DV for popular games

GEI	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Treatment lead (t – 4)	4.382	3.703	1.18	0.275	-4.375	13.138	
Treatment lead (t – 3)	-1.481	3.843	-0.39	0.711	-10.569	7.607	
Treatment lead (t – 2)	-5.476	2.328	-2.35	0.051	-10.982	0.030	*
Treatment lead (t – 1)	-2.489	1.129	-2.20	0.063	-5.160	0.181	*
Treatment effect (t + 1)	5.972	1.061	5.63	0.001	3.462	8.481	***
Treatment effect (t + 2)	6.534	3.275	2.00	0.086	-1.209	14.277	*
Treatment effect (t + 3)	6.568	3.368	1.95	0.092	-1.396	14.532	*
Treatment effect (t + 4)	8.886	4.564	1.95	0.093	-1.907	19.679	*
Treatment effect (t + 5)	9.331	5.133	1.82	0.112	-2.807	21.469	
Treatment effect (t + 6)	3.103	5.143	0.60	0.565	-9.059	15.264	
Treatment effect (t + 7)	4.261	5.327	0.80	0.450	-8.335	16.857	
Treatment effect (t + 8)	4.353	5.986	0.73	0.491	-9.802	18.508	
Treatment effect (t + 9)	0.973	5.544	0.18	0.866	-12.135	14.081	
Treatment effect (t + 10)	-4.311	5.782	-0.75	0.480	-17.983	9.360	
3b.Countr	0.000	.	.	.	.	.
Indonesia	6.855	3.845	1.78	0.118	-2.237	15.947	
Italy	21.722	3.336	6.51	0.000	13.833	29.610	***
Portugal	30.900	0.967	31.9	0.000	28.612	33.187	***
			5				
Spain	31.174	4.955	6.29	0.000	19.457	42.892	***
Turkey	4.441	0.565	7.86	0.000	3.105	5.777	***
Korea	26.840	5.635	4.76	0.002	13.515	40.165	***
Russia	27.355	5.312	5.15	0.001	14.794	39.916	***
2006b	0.000	.	.	.	.	.
2007	5.659	1.860	3.04	0.019	1.260	10.058	**
2008	8.794	3.286	2.68	0.032	1.024	16.563	**
2009	5.345	3.938	1.36	0.217	-3.968	14.657	
2010	0.735	3.458	0.21	0.838	-7.441	8.911	
2011	-4.840	2.532	-1.91	0.098	-10.827	1.147	*
2012	-4.224	1.346	-3.14	0.016	-7.406	-1.042	**
2013	-5.025	0.156	-	0.000	-5.395	-4.656	***
			32.1				
			2				
2014	-6.450	1.800	-3.58	0.009	-10.705	-2.194	***
2015	-0.277	1.746	-0.16	0.878	-4.406	3.852	
2016	-0.626	2.329	-0.27	0.796	-6.132	4.881	
2017	-1.525	2.637	-0.58	0.581	-7.761	4.712	
2018	0.517	3.259	0.16	0.878	-7.188	8.223	
2019	2.594	3.804	0.68	0.517	-6.402	11.590	
Constant	17.817	3.775	4.72	0.002	8.891	26.744	***

Mean dependent var	35.846	SD dependent var	12.055
R-squared	0.993	Number of obs	60.000
F-test	.	Prob > F	.
Akaike crit. (AIC)	181.158	Bayesian crit. (BIC)	195.818

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 17: Dynamic DID regression with GEI as the DV for less popular games

GEI	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
o.D0	0.000						
Treatment lead (t – 4)	-4.377	3.740	-1.17	0.254	-12.133	3.378	
Treatment lead (t – 3)	-6.885	3.880	-1.77	0.090	-14.931	1.162	*
Treatment lead (t – 2)	-7.420	3.880	-1.91	0.069	-15.466	0.627	*
Treatment lead (t – 1)	-0.923	2.239	-0.41	0.684	-5.567	3.722	
Treatment effect (t + 1)	2.492	2.644	0.94	0.356	-2.992	7.977	
Treatment effect (t + 2)	1.601	2.746	0.58	0.566	-4.093	7.295	
Treatment effect (t + 3)	-0.519	2.574	-0.20	0.842	-5.857	4.819	
Treatment effect (t + 4)	-0.940	2.253	-0.42	0.680	-5.612	3.732	
Treatment effect (t + 5)	6.478	3.136	2.07	0.051	-0.026	12.982	*
Treatment effect (t + 6)	4.645	3.746	1.24	0.228	-3.124	12.413	
Treatment effect (t + 7)	-0.114	3.515	-0.03	0.974	-7.404	7.176	
Treatment effect (t + 8)	3.180	3.198	0.99	0.331	-3.452	9.812	
Treatment effect (t + 9)	4.505	3.361	1.34	0.194	-2.465	11.474	
2b.Countr	0.000						
Brazil	-43.284	1.696	-25.52	0.000	-46.801	-39.767	***
France	-0.593	2.191	-0.27	0.789	-5.138	3.951	
Indonesia	-43.667	1.995	-21.89	0.000	-47.804	-39.529	***
Japan	-14.757	1.167	-12.64	0.000	-17.178	-12.336	***
Portugal	-28.318	2.220	-12.75	0.000	-32.923	-23.713	***

Turkey	-21.449	1.490	-	0.000	-24.538	-18.359	***
			14.4				
			0				
United States	16.127	1.216	13.2	0.000	13.606	18.649	***
			6				
2006b	0.000	.	.	.	.	.
2007	0.026	1.573	0.02	0.987	-3.236	3.289	
2008	-1.066	1.573	-0.68	0.505	-4.328	2.197	
2009	-4.623	1.809	-2.56	0.018	-8.374	-0.871	**
2010	-4.246	2.031	-2.09	0.048	-8.459	-0.033	**
2011	-4.172	1.810	-2.31	0.031	-7.927	-0.418	**
2012	-3.866	1.859	-2.08	0.049	-7.721	-0.012	**
2013	-3.718	1.587	-2.34	0.029	-7.009	-0.427	**
2014	-3.036	1.716	-1.77	0.091	-6.595	0.523	*
2015	-4.178	2.116	-1.98	0.061	-8.566	0.210	*
2016	-3.297	2.348	-1.40	0.174	-8.168	1.573	
2017	-2.954	2.024	-1.46	0.158	-7.151	1.242	
2018	-1.832	1.626	-1.13	0.272	-5.205	1.540	
2019	-4.566	1.883	-2.42	0.024	-8.471	-0.660	**
Constant	67.754	1.163	58.2	0.000	65.342	70.167	***
			4				

Mean dependent var	54.717	SD dependent var	18.450
R-squared	0.996	Number of obs	56.000
F-test	185.354	Prob > F	0.000
Akaike crit. (AIC)	253.791	Bayesian crit. (BIC)	322.653

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 18: Dynamic DID regression with GEI as the DV for developed countries

GEI	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Treatment lead (t – 4)	-2.710	2.158	-1.25	0.238	-7.519 2.099	
Treatment lead (t – 3)	-2.956	3.081	-0.96	0.360	-9.822 3.910	
Treatment lead (t – 2)	-0.114	6.345	-0.02	0.986	-14.252 14.024	
Treatment lead (t – 1)	-5.581	2.304	-2.42	0.036	-10.716 -0.447	**
Treatment effect (t +)	4.060	1.089	3.73	0.004	1.633 6.487	***

1)								
Treatment effect (t +	4.129	1.992	2.07	0.065	-0.308	8.566	*	
2)								
Treatment effect (t +	-0.196	1.612	-0.12	0.905	-3.788	3.395		
3)								
Treatment effect (t +	0.767	2.256	0.34	0.741	-4.260	5.793		
4)								
Treatment effect (t +	0.000	.	.	.	.	.
5)								
Treatment effect (t +	4.480	2.716	1.65	0.130	-1.572	10.532		
6)								
Treatment effect (t +	3.136	4.518	0.69	0.503	-6.930	13.203		
7)								
Treatment effect (t +	7.571	4.950	1.53	0.157	-3.458	18.599		
8)								
2b.Countr	0.000	.	.	.	.	.
3.Countr	-43.179	0.237	-	0.000	-43.706	-42.651	***	
			182.2					
			8					
4.Countr	-1.525	2.098	-0.73	0.484	-6.199	3.149		
6.Countr	-43.031	0.379	-	0.000	-43.875	-42.187	***	
			113.6					
			1					
8.Countr	-13.723	0.643	-21.34	0.000	-15.156	-12.289	***	
9.Countr	-16.424	2.366	-6.94	0.000	-21.697	-11.152	***	
11.Countr	-19.779	0.709	-27.88	0.000	-21.360	-18.199	***	
13.Countr	-39.517	0.328	-	0.000	-40.248	-38.786	***	
			120.4					
			1					
14.Countr	-17.995	1.359	-13.24	0.000	-21.023	-14.968	***	
15.Countr	-22.711	1.017	-22.34	0.000	-24.977	-20.446	***	
17.Countr	16.111	0.349	46.21	0.000	15.334	16.888	***	
2006b.year	0.000	.	.	.	.	.
2007.year	-2.235	2.361	-0.95	0.366	-7.494	3.025		
2008.year	-1.378	1.165	-1.18	0.264	-3.973	1.217		
2009.year	-1.723	1.022	-1.69	0.123	-4.000	0.554		
2010.year	-2.265	1.784	-1.27	0.233	-6.239	1.710		
2011.year	-4.530	1.351	-3.35	0.007	-7.540	-1.521	***	
2012.year	-3.719	1.148	-3.24	0.009	-6.277	-1.160	***	
2013.year	-3.855	1.028	-3.75	0.004	-6.145	-1.565	***	
2014.year	-2.752	0.967	-2.85	0.017	-4.907	-0.597	**	
2015.year	-1.133	2.471	-0.46	0.656	-6.638	4.373		
2016.year	-1.465	1.281	-1.14	0.279	-4.319	1.389		
2017.year	-2.294	1.149	-2.00	0.074	-4.855	0.266	*	
2018.year	-1.793	1.018	-1.76	0.109	-4.061	0.475		

2019.year	-2.827	1.878	-1.51	0.163	-7.011	1.356	
Constant	67.019	0.525	127.7	0.000	65.849	68.188	***

1

Mean dependent var	45.759	SD dependent var	19.000
R-squared	0.988	Number of obs	102.000
F-test	.	Prob > F	.
Akaike crit. (AIC)	437.780	Bayesian crit. (BIC)	464.029

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 19: Dynamic DID regression with GEI as the DV for developing countries

GEI	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Treatment lead (t – 5)	1.517	2.223	0.68	0.510	-3.435	6.470	
Treatment lead (t – 4)	-3.378	1.973	-1.71	0.118	-7.776	1.019	
Treatment lead (t – 3)	-1.973	3.078	-0.64	0.536	-8.831	4.884	
Treatment lead (t – 2)	-1.774	1.791	-0.99	0.345	-5.765	2.217	
Treatment lead (t – 1)	-0.511	1.332	-0.38	0.709	-3.478	2.456	
Treatment effect (t + 1)	-0.231	1.968	-0.12	0.909	-4.617	4.155	
Treatment effect (t + 2)	-3.988	2.030	-1.96	0.078	-8.512	0.536	*
Treatment effect (t + 3)	-2.771	1.761	-1.57	0.147	-6.694	1.153	
Treatment effect (t + 4)	-2.567	2.306	-1.11	0.292	-7.705	2.571	
Treatment effect (t + 5)	0.502	2.690	0.19	0.856	-5.492	6.495	
Treatment effect (t + 6)	-6.520	1.596	-4.08	0.002	-10.077	-2.964	***
Treatment effect (t + 7)	-6.942	3.212	-2.16	0.056	-14.098	0.213	*
Treatment effect (t + 8)	-6.794	2.560	-2.65	0.024	-12.497	-1.091	**

Treatment effect (t + 9)	-6.539	2.998	-2.18	0.054	-13.220	0.141	*
Treatment effect (t + 10)	-10.602	2.867	-3.70	0.004	-16.991	-4.213	***
2b.Countr	0.000	.	.	.	.	.	.
3.Countr	-39.918	1.563	-25.54	0.000	-43.401	-36.436	***
4.Countr	-0.064	0.458	-0.14	0.892	-1.084	0.956	.
6.Countr	-43.189	1.468	-29.42	0.000	-46.460	-39.918	***
8.Countr	-13.142	0.809	-16.24	0.000	-14.945	-11.340	***
9.Countr	-14.050	0.747	-18.81	0.000	-15.714	-12.386	***
11.Countr	-20.557	0.841	-24.45	0.000	-22.430	-18.684	***
13.Countr	-36.345	1.497	-24.27	0.000	-39.681	-33.008	***
14.Countr	-20.164	1.534	-13.15	0.000	-23.581	-16.746	***
15.Countr	-25.309	1.290	-19.61	0.000	-28.184	-22.434	***
17.Countr	16.344	0.451	36.26	0.000	15.340	17.348	***
2006b.year	0.000	.	.	.	.	.	.
2007.year	-2.429	2.129	-1.14	0.281	-7.173	2.316	.
2008.year	-2.458	0.819	-3.00	0.013	-4.283	-0.633	**
2009.year	-3.615	0.961	-3.76	0.004	-5.756	-1.473	***
2010.year	-3.751	1.524	-2.46	0.034	-7.147	-0.354	**
2011.year	-4.637	3.731	-1.24	0.242	-12.952	3.677	.
2012.year	-2.120	2.186	-0.97	0.355	-6.991	2.752	.
2013.year	-2.931	1.671	-1.75	0.110	-6.655	0.793	.
2014.year	-3.133	2.162	-1.45	0.178	-7.951	1.684	.
2015.year	-0.256	2.475	-0.10	0.920	-5.771	5.259	.
2016.year	2.211	2.216	1.00	0.342	-2.728	7.149	.
2017.year	0.972	2.298	0.42	0.681	-4.149	6.092	.
2018.year	1.491	2.295	0.65	0.531	-3.623	6.604	.
2019.year	0.257	2.780	0.09	0.928	-5.938	6.452	.
Constant	66.364	1.306	50.83	0.000	63.455	69.273	***

Mean dependent var	45.759	SD dependent var	19.000
R-squared	0.990	Number of obs	102.000
F-test	.	Prob > F	.
Akaike crit. (AIC)	423.521	Bayesian crit. (BIC)	449.771

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 20: Dynamic DID regression in high rule of law countries

GEI	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Treatment lead (t – 4)	-0.007	2.822	-0.00	0.998	-6.911 6.897	.

Treatment lead (t – 3)	2.319	7.035	0.33	0.753	-14.895	19.532	
Treatment lead (t – 2)	3.633	5.423	0.67	0.528	-9.638	16.903	
Treatment lead (t – 1)	-2.213	2.664	-0.83	0.438	-8.732	4.306	
Treatment effect (t + 1)	7.035	1.621	4.34	0.005	3.069	11.000	***
Treatment effect (t + 2)	6.902	2.641	2.61	0.040	0.439	13.364	**
Treatment effect (t + 3)	2.158	3.944	0.55	0.604	-7.493	11.809	
Treatment effect (t + 4)	3.782	4.990	0.76	0.477	-8.428	15.992	
o.D9	0.000	.	.	.	.	.
Treatment effect (t + 6)	6.280	5.204	1.21	0.273	-6.453	19.013	
Treatment effect (t + 7)	5.441	5.105	1.07	0.327	-7.051	17.933	
Treatment effect (t + 8)	8.585	5.321	1.61	0.158	-4.436	21.606	
Treatment effect (t + 9)	5.024	5.064	0.99	0.359	-7.367	17.415	
2b.Countr	0.000	.	.	.	.	.
4.Countr	-4.215	3.223	-1.31	0.239	-12.101	3.671	
8.Countr	-	1.679	-7.56	0.000	-16.795	-8.580	***
9.Countr	12.688	2.671	-6.91	0.000	-24.979	-11.909	***
11.Countr	18.444	2.212	-8.71	0.000	-24.690	-13.864	***
14.Countr	19.277	1.987	-9.82	0.000	-24.379	-14.653	***
17.Countr	19.516	0.242	66.72	0.000	15.558	16.742	***
2006b.year	0.000	.	.	.	.	.
2007.year	-4.807	5.414	-0.89	0.409	-18.055	8.441	
2008.year	-3.874	2.861	-1.35	0.225	-10.876	3.128	
2009.year	-2.389	1.428	-1.67	0.145	-5.884	1.106	
2010.year	-1.898	3.237	-0.59	0.579	-9.819	6.023	
2011.year	-4.596	1.623	-2.83	0.030	-8.567	-0.624	**
2012.year	-4.867	0.776	-6.27	0.001	-6.767	-2.968	***
2013.year	-3.516	1.540	-2.28	0.063	-7.285	0.253	*
2014.year	-3.064	2.760	-1.11	0.309	-9.817	3.688	
2015.year	-1.702	2.832	-0.60	0.570	-8.632	5.227	
2016.year	-0.563	3.328	-0.17	0.871	-8.706	7.581	

2017.year	-2.763	2.898	-0.95	0.377	-9.855	4.328	
2018.year	-1.199	2.483	-0.48	0.646	-7.274	4.875	
2019.year	-0.715	2.886	-0.25	0.813	-7.777	6.347	
Constant	67.006	0.958	69.94	0.000	64.661	69.350	***

Mean dependent var	58.416	SD dependent var	11.608
R-squared	0.977	Number of obs	63.000
F-test	.	Prob > F	.
Akaike crit. (AIC)	261.510	Bayesian crit. (BIC)	274.369

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 21: Dynamic DID regression in low rule of law countries

GEI	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Treatment lead (t – 5)	2.349	2.653	0.89	0.397	-3.563	8.261	
Treatment lead (t – 4)	-1.147	2.933	-0.39	0.704	-7.684	5.389	
Treatment lead (t – 3)	0.158	4.255	0.04	0.971	-9.323	9.640	
Treatment lead (t – 2)	0.050	2.730	0.02	0.986	-6.033	6.133	
Treatment lead (t – 1)	1.042	1.818	0.57	0.579	-3.010	5.093	
Treatment effect (t + 1)	2.808	1.896	1.48	0.170	-1.418	7.033	
Treatment effect (t + 2)	0.811	3.294	0.25	0.811	-6.529	8.151	
Treatment effect (t + 3)	-0.310	2.263	-0.14	0.894	-5.353	4.733	
Treatment effect (t + 4)	0.454	3.122	0.14	0.887	-6.502	7.410	
Treatment effect (t + 5)	4.030	3.803	1.06	0.314	-4.443	12.504	
Treatment effect (t + 6)	-0.752	4.088	-0.18	0.858	-9.860	8.355	
Treatment effect (t + 7)	-1.051	4.840	-0.22	0.833	-11.836	9.734	
Treatment effect (t + 8)	1.169	5.717	0.20	0.842	-11.570	13.908	
Treatment effect (t + 9)	-0.727	4.677	-0.15	0.880	-11.148	9.694	
Treatment effect (t + 10)	-5.899	4.281	-1.38	0.198	-15.437	3.638	
2b.Countr	0.000	.	.	.	.	.
3.Countr	-43.453	2.656	-16.36	0.000	-49.371	-37.534	***
4.Countr	0.143	2.783	0.05	0.960	-6.057	6.344	
6.Countr	-44.917	1.916	-23.45	0.000	-49.186	-40.649	***
8.Countr	-13.678	1.024	-13.36	0.000	-15.959	-11.396	***
9.Countr	-14.099	2.587	-5.45	0.000	-19.864	-8.334	***
11.Countr	-20.138	0.956	-21.06	0.000	-22.268	-18.007	***
13.Countr	-39.690	2.701	-14.70	0.000	-45.707	-33.672	***
14.Countr	-19.034	1.951	-9.76	0.000	-23.382	-14.687	***
15.Countr	-23.999	1.724	-13.92	0.000	-27.841	-20.157	***
17.Countr	16.365	0.409	39.99	0.000	15.453	17.277	***

2006b.year	0.000	.	.	.	.	.
2007.year	-2.631	2.477	-1.06	0.313	-8.151	2.889	
2008.year	-1.870	0.516	-3.62	0.005	-3.020	-0.719	***
2009.year	-2.987	1.507	-1.98	0.076	-6.346	0.371	*
2010.year	-3.646	2.186	-1.67	0.126	-8.516	1.224	
2011.year	-6.190	1.836	-3.37	0.007	-10.280	-2.100	***
2012.year	-3.866	1.476	-2.62	0.026	-7.154	-0.578	**
2013.year	-3.677	1.768	-2.08	0.064	-7.617	0.262	*
2014.year	-3.820	2.380	-1.60	0.140	-9.123	1.482	
2015.year	-2.172	2.768	-0.79	0.451	-8.340	3.996	
2016.year	-0.233	2.826	-0.08	0.936	-6.530	6.063	
2017.year	-1.361	2.958	-0.46	0.655	-7.951	5.229	
2018.year	-0.752	2.693	-0.28	0.786	-6.753	5.249	
2019.year	-1.808	3.201	-0.56	0.585	-8.940	5.324	
Constant	67.261	1.190	56.50	0.000	64.608	69.913	***
<hr/>							
Mean dependent var		45.759	SD dependent var			19.000	
R-squared		0.988	Number of obs			102.000	
F-test		.	Prob > F			.	
Akaike crit. (AIC)		438.483	Bayesian crit. (BIC)			464.733	

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 22: Descriptive statistics of the sample

Years/ Countries ¹	C 1	C 2	C 3	C 4	C 5	C 6	C 7	C 8	C 9	C1 0	C1 1	C1 2	Tot al	Missin g
2006						1			1			2	4	9
2007				1		2			1			1	5	8
2008				1		2			1	1		1	6	7
2007- 2008												1	1	
2009						1			1	1		2	6	9
2010	1					1		1	1	1		2	7	6
2011	1					1		1	1	1	1	2	8	5
2012	1		2			1			2	1		2	9	6
2013						1			1	1		3	6	8
2014	1					1			1			1	4	8
2015						1						1	2	10
2016			1			1						1	3	9
2015- 2016									1				1	
2017			1			1						1	3	9
2016- 2017									1				1	
2018						1				1		1	3	9
2017- 2018									1				1	
2019						1				1		1	3	9
Total	4	0	4	2	0	1	0	2	1	8	1	22	72	
Missing	1	1	11	1	1	2	1	1	5	6	13	2		112
	0	4		2	4		4	2						

¹ C1: Belgium, C2: France, C3: Germany, C4: Italy, C5: Japan, C6: Netherlands, C7: Portugal, C8: Russia, C9: South Africa, C10: South Korea, C11: Spain, C12: United Kingdom

² The green are the countries whose reports are available in full for each year.

³ Those in red are those who didn't have English reports between 2006-2019.

⁴ If the total dataset for 12 countries and 14 years was complete, it should have included

$12 \times 14 = 168$ reports. While there are no reports in English for the relevant time period for 3 countries, some countries have more than one report of the same year but prepared for different purposes. In addition, the reports of the two countries in some years, such as 2007- 2008, 2015-2016 are not annual reports but periodic reports. Therefore, the research sample included 72 reports instead of 168 reports, which were found by subtracting 96 missing reports from 168.

Table 23: Frequencies of keywords (number of reports)

#	Keyword	n	n (accepted)
1	“World Cup”	9	9
2	Sport, Sporting, “Large-scale sport”, “Large-scale sporting”	7	1
3	“FIFA World Cup” & “FIFA World Cup”	5	5
4	FIFA	5	5
5	Olympics	1	0
6	Games	1	0
7	“Summer Olympic Games”	0	0
8	“Winter Olympic Games”	0	0
9	“Euro” & “UEFA” & “Euro Cup”	0	0
1	“Asian Games”	0	0
0			

n: Number of reports, including the keyword.
n (accepted): Accepted for analysis as directly or indirectly related to large-scale sporting events

Table 24: Frequencies of keywords (number of mentions)

#	Keyword	n	n (accepted)
1	“World Cup”, “FIFA World Cup”, “FIFA Soccer World Cup”, FIFA, “Large-scale sport”, “Large-scale sporting”	47	47
2	Sport, Sporting	34	0
3	Olympics	1	0
4	Games	1	0

n: Number of times that the keyword is mentioned.

n (accepted): Accepted for analysis as directly or indirectly related to large-scale sporting events

Table 25: Countries of reports before and after checking their relevance

#	Keyword	[Before]	[After]
		Countries including keywords	Countries accepted
1	“World Cup”, “FIFA World Cup”, “FIFA Soccer World Cup”, FIFA, “Large-scale sport”, “Large-scale sporting”	1. South Africa	1. South Africa
2	Sport, Sporting	1. South Africa 2. The Netherlands 3. South Korea	-
3	Olympics	1. Scotland	-
4	Games	1. South Africa	-
5	“Summer Olympic Games”	n/a	n/a
6	“Winter Olympic Games”	n/a	n/a

[After]: meaning that it includes the keyword and the relevance to a mega sporting event has been checked, then the report is accepted for further analysis.

n/a: not applicable as none of the reports include the keyword.

Table 26: Stepwise regression H1

GEI		Coef.	Std.Err.	t	P>t	[95%Conf.	Interval]
Treatment (t+6)	effect	3.613	1.613	2.240	0.049	0.018	7.208
Treatment (t+11)	effect	-6.033	0.251	-24.010	0.000	-6.593	-5.473
Countr							
Brazil		-43.127	0.209	-205.990	0.000	-43.594	-42.661
Indonesia		-43.867	0.376	-116.770	0.000	-44.704	-43.030
Japan		-13.658	0.067	-202.570	0.000	-13.808	-13.508
Korea		-14.346	0.092	-156.380	0.000	-14.551	-14.142
Portugal		-19.953	0.053	-377.210	0.000	-20.071	-19.836
Russia		-39.822	0.359	-111.010	0.000	-40.621	-39.022
Spain		-18.703	0.088	-211.680	0.000	-18.900	-18.507
Turkey		-23.305	0.127	-182.940	0.000	-23.589	-23.022
United States		15.561	0.150	103.820	0.000	15.227	15.895
year							
2013		-1.670	0.650	-2.570	0.028	-3.118	-0.221
2014		-1.791	0.924	-1.940	0.081	-3.849	0.266
_cons		65.260	0.127	512.260	0.000	64.976	65.544

Table 27: Stepwise regression H2 - Popular game

GEI		Coef.	Std.Err.	t	P>t	[95%Conf	Interval]
Treatment effect (t+1)		4.020	1.395	2.880	0.024	0.721	7.319
Treatment effect (t+2)		3.501	1.062	3.300	0.013	0.989	6.013
Treatment effect (t+3)		3.834	1.468	2.610	0.035	0.364	7.304
Treatment effect (t+4)		6.375	1.499	4.250	0.004	2.832	9.919
Treatment effect (t+5)		6.536	0.713	9.170	0.000	4.851	8.221
year							
2007		5.066	1.630	3.110	0.017	1.211	8.922
2008		7.534	0.340	22.130	0.000	6.729	8.339
2009		3.298	0.435	7.590	0.000	2.271	4.326
2011		-7.396	2.662	-2.780	0.027	-13.692	-1.100
2012		-4.930	1.581	-3.120	0.017	-8.668	-1.193
2013		-5.317	0.621	-8.560	0.000	-6.785	-3.849
2014		-7.103	2.153	-3.300	0.013	-12.194	-2.012
Countr							
Indonesia		4.268	0.629	6.780	0.000	2.780	5.756
Italy		19.563	0.489	40.010	0.000	18.407	20.719
Korea		31.998	0.743	43.060	0.000	30.240	33.755
Portugal		28.703	0.433	66.330	0.000	27.680	29.726
Russia		4.830	0.082	59.080	0.000	4.637	5.023
Spain		26.271	0.592	44.390	0.000	24.871	27.670
Turkey		23.491	0.637	36.900	0.000	21.986	24.996
_cons		20.606	0.637	32.370	0.000	19.101	22.111

Table 28: Stepwise regression H2 - Less Popular game

GEI		Coef.	Std.Err.	t	P>t	[95%Con f.	Interval]
Treatment (t+6)	effect	5.002	0.217	23.050	0.000	4.525	5.480
Treatment (t+7)	effect	3.974	0.423	9.400	0.000	3.044	4.904
Treatment (t+8)	effect	3.974	0.423	9.400	0.000	3.044	4.904
Treatment (t+9)	effect	2.566	0.423	6.070	0.000	1.635	3.496
Countr							
Brazil		-42.637	0.420	-101.460	0.000	-43.562	-41.712
Indonesia		-43.536	0.446	-97.620	0.000	-44.518	-42.555
Italy		-23.268	0.423	-55.040	0.000	-24.199	-22.338
Japan		-13.047	0.421	-31.010	0.000	-13.973	-12.121
Korea		-13.851	0.419	-33.090	0.000	-14.773	-12.930
Portugal		-21.476	0.420	-51.120	0.000	-22.400	-20.551
Russia		-38.779	0.421	-92.100	0.000	-39.706	-37.853
Spain		-17.844	0.423	-42.210	0.000	-18.774	-16.914
Turkey		-20.656	0.423	-48.860	0.000	-21.586	-19.725
United States		16.030	0.419	38.260	0.000	15.108	16.953
year							
2013		-1.285	0.286	-4.500	0.001	-1.914	-0.656
_cons		64.534	0.423	152.660	0.000	63.604	65.465

Table 29: Stepwise regression H3 - Developed Countries

GEI		Coef.	Std.Err.	t	P>t	[95%Con f.	Interval]
Treatment effect (t+1)		6.848	2.513	2.720	0.021	1.248	12.448
Treatment effect (t+2)		3.652	0.707	5.160	0.000	2.076	5.229
Countr							
Brazil		-43.658	0.181	-241.850	0.000	-44.060	-43.256
France		-1.159	0.219	-5.310	0.000	-1.646	-0.672
Indonesia		-43.083	0.276	-156.170	0.000	-43.698	-42.469
Japan		-13.846	0.061	-228.460	0.000	-13.981	-13.711
Korea		-13.955	0.278	-50.200	0.000	-14.574	-13.335
Portugal		-20.541	0.215	-95.550	0.000	-21.020	-20.062
Russia		-39.624	0.076	-520.610	0.000	-39.794	-39.454
Spain		-19.279	0.230	-83.710	0.000	-19.793	-18.766
Turkey		-23.782	0.230	-103.260	0.000	-24.295	-23.269
United States		15.845	0.203	77.980	0.000	15.392	16.298
year							
2011		-4.641	2.529	-1.840	0.096	-10.275	0.993
2012		-1.934	0.729	-2.650	0.024	-3.558	-0.310
2013		-2.366	0.645	-3.670	0.004	-3.802	-0.930
D11		3.931	0.129	30.490	0.000	3.644	4.218
D12		2.523	0.129	19.570	0.000	2.236	2.810
_cons		65.736	0.230	285.440	0.000	65.223	66.250

Table 30: Stepwise regression H3 - Developing Countries

GEI		Coef.	Std.Err.	t	P>t	[95%Conf.	Interval]
Treatment effect (t+10)		-6.089	0.268	-22.700	0.000	-6.686	-5.491
Countr							
Brazil		-42.943	0.296	-145.260	0.000	-43.601	-42.284
Indonesia		-43.634	0.554	-78.730	0.000	-44.869	-42.399
Japan		-13.619	0.044	-310.030	0.000	-13.717	-13.521
Korea		-14.509	0.061	-237.890	0.000	-14.645	-14.373
Portugal		-19.997	0.039	-509.110	0.000	-20.085	-19.910
Russia		-39.800	0.329	-120.800	0.000	-40.534	-39.066
Spain		-18.674	0.067	-277.100	0.000	-18.824	-18.524
Turkey		-23.177	0.067	-343.910	0.000	-23.327	-23.026
United States		15.578	0.147	106.010	0.000	15.251	15.906
year							
2013		-1.755	0.642	-2.730	0.021	-3.185	-0.325
_cons		65.131	0.067	966.450	0.000	64.981	65.281

Table 31: Stepwise regression H3 - High Rule of Law

GEI	Coef.	Std.Err.	t	P>t	[95%Conf	Interval]
year						
2012	-1.783	0.906	-1.970	0.097	-4.000	0.435
D5	4.859	0.850	5.720	0.001	2.779	6.938
D6	5.265	1.557	3.380	0.015	1.456	9.074
Countr						
France	-4.327	0.169	-25.550	0.000	-4.741	-3.912
Japan	-13.712	0.017	-	0.000	-13.753	-13.670
Korea	-18.099	0.200	804.940	0.000	-18.588	-17.611
Portugal	-20.269	0.065	-90.640	0.000	-20.427	-20.110
Spain	-18.768	0.065	-	0.000	-18.926	-18.610
United States	15.081	0.005	313.120	0.000	15.069	15.093
D8	2.610	0.156	289.940	0.000	2.227	2.993
D10	7.610	0.156	3028.790	0.000	7.227	7.993
D11	5.124	1.848	16.680	0.032	0.602	9.647
D12	9.292	1.633	48.630	0.001	5.296	13.287
D13	6.202	0.156	39.630	0.000	5.819	6.584
_cons	65.225	0.065	1007.640	0.000	65.067	65.383

Table 32: Stepwise regression H3 - Low Rule of Law

GEI		Coef.	Std.Err.	t	P>t	[95%Conf	Interval]
Treatment effect (t+5)		3.486	1.675	2.080	0.064	-0.245	7.218
Treatment effect (t+10)		-6.108	0.202	-30.240	0.000	-6.559	-5.658
Countr							
Brazil		-43.084	0.120	-360.110	0.000	-43.351	-42.817
Indonesia		-43.785	0.278	-157.590	0.000	-44.404	-43.166
Japan		-13.689	0.051	-268.910	0.000	-13.802	-13.575
Korea		-14.369	0.075	-191.860	0.000	-14.536	-14.202
Portugal		-19.982	0.024	-826.910	0.000	-20.036	-19.929
Russia		-39.607	0.060	-661.590	0.000	-39.740	-39.474
Spain		-18.733	0.062	-300.770	0.000	-18.871	-18.594
Turkey		-23.338	0.107	-218.820	0.000	-23.575	-23.100
United States		15.526	0.094	165.040	0.000	15.316	15.735
year							
2013		-1.647	0.420	-3.920	0.003	-2.583	-0.710
2014		-1.848	0.915	-2.020	0.071	-3.888	0.192
_cons		65.292	0.107	612.210	0.000	65.055	65.530

APPENDIX 2: THE LIST OF 72 REPORTS CONSTITUTING THE RESEARCH

SAMPLE

#	Language	Country	Report Name	Year
1	English	Belgium	GEM Belgium 2010 Report	2010
2	English	Belgium	GEM Belgium 2011 Report	2011
3	English	Belgium	GEM Belgium 2012 Report	2012
4	English	Belgium	GEM Belgium and Flanders 2014 Report	2014
5	English	Germany	GEM Germany 2012 - IAB Brief Report on Business start-ups by migrants	2012
6	English	Germany	GEM Germany 2012 Report - Executive Summary	2012
7	English	Germany	GEM National Report Germany 2016 - Executive Summary	2016
8	English	Germany	GEM National Report Germany 2017 - Executive Summary	2017
9	English	Italy	GEM Italy 2007 Report	2007
10	English	Italy	GEM Italy 2008 Report	2008
11	English	Netherlands	GEM Netherlands 2006 Report	2006
12	English	Netherlands	GEM Netherlands 2007 Report	2007
13	English	Netherlands	GEM Netherlands 2007 Report	2007
14	English	Netherlands	GEM Netherlands 2008 Report	2008
15	English	Netherlands	GEM Netherlands 2008 Report	2008
16	English	Netherlands	GEM Netherlands 2009 Report	2009
17	English	Netherlands	GEM Netherlands 2010 Report	2010

18	English	Netherlands	GEM Netherlands 2011 Report	2011
19	English	Netherlands	GEM Netherlands 2012 Report	2012
20	English	Netherlands	GEM Netherlands 2013 Report	2013
21	English	Netherlands	GEM Netherlands 2014 Report	2014
22	English	Netherlands	GEM Netherlands 2015 report	2015
23	English	Netherlands	GEM Netherlands 2016 report	2016
#	Language	Country	Report Name	Year
				2017
24	English	Netherlands	GEM Netherlands 2017 report	
25	English	Netherlands	GEM Netherlands 2018 report	2018
26	English	Netherlands	GEM Netherlands 2019 report	2019
27	English	Russia	GEM Russia 2010 Report (English)	2010
28	English	Russia	GEM Russia 2011 Report (English)	2011
29	English	South Africa	GEM South Africa 2006 Report	2006
30	English	South Africa	GEM South Africa 2007 Report	2007
31	English	South Africa	GEM South Africa 2008 Report	2008
32	English	South Africa	GEM South Africa 2009 Report	2009
33	English	South Africa	GEM South Africa 2010 Report	2010
34	English	South Africa	GEM South Africa 2011 Report	2011
35	English	South Africa	GEM 2012 Sub-Saharan Africa Regional Report	2012
36	English	South Africa	GEM South Africa 2012 Report	2012
37	English	South Africa	GEM South Africa 2013 Report	2013
38	English	South Africa	GEM South Africa 2014 Report	2014
39	English	South Africa	GEM South Africa 2015 - 2016 Report	2015-2016
40	English	South Africa	GEM South Africa 2016-2017 Report	2016-2017
41	English	South Africa	GEM South Africa 2017-2018 Report	2017-2018

42	English	South Korea	GEM South Korea 2008 Report (English)	2008
43	English	South Korea	GEM South Korea 2009 Report (English)	2009
44	English	South Korea	GEM South Korea 2010 Report (English)	2010
45	English	South Korea	GEM South Korea 2011 Report (English)	2011
46	English	South Korea	GEM South Korea 2012 Report (English)	2012
47	English	South Korea	GEM South Korea 2013 Report (English)	2013
#	Language	Country	Report Name	Year
48	English	South Korea	GEM South Korea 2018 Report (English)	2018
49	English	South Korea	GEM South Korea 2019 Report (English)	2019
50	English	Spain	GEM Spain 2011 Report - Aragon	2011
51	English	United Kingdom	GEM United Kingdom 2006 Report	2006
52	English	United Kingdom	GEM United Kingdom 2007 Report	2007
53	English	United Kingdom	GEM United Kingdom 2008 Report	2008
54	English	United Kingdom	GEM United Kingdom 2009 Report	2009
55	English	United Kingdom	GEM United Kingdom 2010 Report	2010

56	English	United Kingdom	GEM United Kingdom 2011 Report	2011
57	English	United Kingdom	GEM United Kingdom 2012 Report	2012
58	English	United Kingdom	GEM United Kingdom 2014 Report	2013
59	English	United Kingdom	GEM United Kingdom 2013 Report	2013
60	English	United Kingdom	GEM United Kingdom 2015 report	2015
61	English	United Kingdom	GEM UK 2016 Report	2016
62	English	United Kingdom	GEM United Kingdom 2017 Report	2017
63	English	United Kingdom	GEM UK 2018 Monitoring Report	2018
<hr/>				
	Language	Country	Report Name	Year
<hr/>				
64	English	United Kingdom	GEM UK 2019 Monitoring report	2019
65	English	United Kingdom	GEM United Kingdom 2006 Report - Scotland	2006
66	English	United Kingdom	GEM United Kingdom 2007-08 Report - Scotland	2007-2008
67	English	United Kingdom	GEM United Kingdom 2009 Report - Scotland	2009
68	English	United Kingdom	GEM United Kingdom 2010 Report - Scotland	2010

6 9	English	United Kingdom	GEM United Kingdom 2011 Report - Scotland	2011
7 0	English	United Kingdom	GEM United Kingdom 2012 Report - Scotland	2012
7 1	English	United Kingdom	GEM United Kingdom 2013 Report - Scotland	2013
7 2	English	United Kingdom	GEM Scotland 2014 Report	2014

APPENDIX 3: TEXT POOL

(A) “**FIFA World Cup**”, “**FIFA Soccer World Cup**”, “**Soccer World Cup**”, “**World Cup**”, “**Large-scale sport**”, “**Large-scale sporting**”:

1. “After some easing of the regulations associated with starting a business between 2007 and 2010 (possibly as a result of South Africa hosting the **FIFA Soccer World Cup**), South Africa has regressed in this area [...]” (GEM, 2016b, 49).
2. “He is well-placed to benefit from the economic windfall that will come with this year’s **FIFA World Cup**, as well as from Cape Town’s continuing reputation as one of the hottest tourist destinations in the world.” (GEM, 2010b, 79).
3. “Strategic Business Unit: 2010 and construction. Mandate at Strategic Business Unit: Main focus is to channel funds to economically viable businesses and industries directly related to the 2010 **FIFA World Cup**TM in the construction area.” (GEM, 2010b, 136).
4. “There was a significant jump in 2010 in the belief that entrepreneurship is a good career choice - probably because of the **Soccer World Cup** - and this indicator has remained high ever since. An encouraging finding is that close to 80% of respondents believe that entrepreneurs are admired in their societies – possibly linked to the consistently high levels of media attention garnered by entrepreneurs since 2010.” (GEM, 2017c, 19).
5. “Nothing has changed dramatically over the years except in 2010 and 2011 when the TEA [*Early-stage entrepreneurial activity*] rate jumped by just over 60%, attributed mainly to the **Soccer World Cup** being hosted in South Africa.” (GEM, 2017c, 49).

6. “[...] only 6.9% of adults are involved in starting up a business is by no means an indication that South Africans have turned their back on entrepreneurship. Sure, the levels have been higher during the feverish times before the financial crash and around the 2010 **World Cup** hype. But for the most part, the figure has hovered around 7% [...]” (GEM, 2017c, 58).

7. “What is encouraging is substantial rise in the level of early- stage entrepreneurial activity (TEA) which has increased by 59.4% from 2016 (6.9%) to 2017 (11%). At first glance this is difficult to explain as it appears that TEA has returned to the high levels experienced in 2010 and 2011 during the **Soccer World Cup** era when people were actively pursuing new business opportunities. However, from a variety of reports this seems possible as there is much buzz around entrepreneurship and start-ups – youth programmes, funding and development, corporate involvement, global conferences in South Africa and so on.” (GEM, 2018c, 6).

8. “[...] TEA has returned to the high levels experience in 2010 and 2011 during the **Soccer World Cup** era when people were actively pursuing new business opportunities.” (GEM, 2018c, 19).

9. “With the hosting of the **FIFA Soccer World Cup** in 2010, the South African economy received a boost – both in terms of the financial returns it gained, as well as the increase in entrepreneurial energy that surged as many new small businesses emerged and entrepreneurial aspirations flourished in anticipation of the opportunities that this major international event signalled. According to Herrington et al (2010), start- ups or nascent entrepreneurship increased from 3.6% (per 100 of the adult population aged between 18 and 64 years) in 2009 to 5.1% in 2010, while the rate of new businesses increased from 2.5% to 3.9% – a fact that the authors say could be credited to South Africa’s hosting of the 2010 **FIFA World Cup**. The TEA rate therefore increased from 5.9% in 2009 (during the global

recession) to 8.9% in 2010 (just before the **World Cup** started) [...]” (GEM, 2012d, 16-17).

10. “The decline in the rate of start-up firms (i.e., in the number of people starting businesses) is not out of line with the general consensus that South Africa’s hosting of the 2010 **FIFA World Cup** created a temporary boom in economic activity as people took advantage of the opportunity to start businesses that would benefit from the influx of foreign visitors.” (GEM, 2012d, 20).

11. “The drastic decline in TEA for the 25–34-year cohort could be partly attributable to the fact that fewer individuals in this group have sought out entrepreneurial opportunities following the 2010 **FIFA World Cup** and have instead entered formal employment.” (GEM, 2012d, 23).

12. “Significantly, 2010 and 2011 sees the TEA rate at its highest ever – raising questions around the factors that have contributed to this unexpected positive change. It may be possible that the **FIFA Soccer World Cup** 2010 bubble has endured longer than initially anticipated, and that some of the growth can be ascribed to the lingering early-stage entrepreneurial activity associated with the event and its implications for local economic growth.” (GEM, 2012d, 67).

13. “After some easing of the regulations associated with starting a business between 2007 and 2010 (possibly as a result of South Africa hosting the **FIFA Soccer World Cup**), South” (GEM, 2015c, 36).

14. “Three years later, in 2012, the actual total early-stage entrepreneurial activity (TEA) rate in 2012 is 7.3% (as indicated in Chapter 1). In 2009, many South Africans were looking forward to hosting the **Soccer World Cup** event in 2010, and some individuals may have intended to pursue perceived business opportunities which arose as a result. The country’s TEA rate did increase in 2010 (from 5.9% in 2009 to 8.9% in 2010) and then remained constant in 2011. In 2012, however, South Africa’s TEA rate has dropped to 7.3%.” (GEM, 2013f, 40).

15. “Given that South Africa hosted the **FIFA Soccer World Cup** in June/July 2010 and that the adult population data was collected in May and June of 2010, a number of questions were included in the survey to assess whether hosting this **large-scale sporting** event had any effect on entrepreneurial attitudes and aspirations. Start-ups were more positive towards the **FIFA World Cup**, in terms of their general attitude towards it as well as the perceived effects on their businesses, than were firms and established businesses. This adds credence to the view that the increase in South Africa’s nascent entrepreneurship rate to 5.1% (up from 3.6% in 2009) is likely to be due, at least in part, to the stimulus of the **FIFA Soccer World Cup**. The positive effect of the **FIFA World Cup** on new firms in terms of increased turnover and client numbers may well have contributed to the improvement in South Africa’s new firm rate (3.9% in 2010, compared to 2.1% in 2008 and 2.5% in 2009), by enabling more start-ups to survive beyond the first three months.” (GEM, 2011d, 4).

16. “Table 2.6: Positive attitudes to the 2010 **FIFA World Cup**, by stage of business. [Statement1:] During 2009-2010, the **World Cup** had a positive impact on my business (%). [Answers:] Start-ups 30%, New firms 17%, Established businesses 30%. [Statement2:] I believe that the **World Cup** will have long-term benefits for business in SA (%). [Answers:] Start-ups 66%, New firms 69%, Established businesses 51%.” (GEM, 2011d, 22).

17. “Table 2.7: Perceived effects of the 2010 **FIFA World Cup**, by stage of business. [Statement1:] Turnover increased (%). [Answers:] Start-ups 61%, New firms 70%, Established businesses 53%. [Statement2:] Number of clients increased (%). [Answers:] Start-ups 64%, New firms 67%, Established businesses 59%. [Statement3:] Number of employees increased (%). [Answers:] Start-ups 22%, New firms 0%, Established businesses 18%. [Statement4:] New products/services related to the **World Cup** introduced (%). [Answers:] Start-ups 31%, New firms 20%, Established businesses 29%.” (GEM, 2011d, 22).

18. “[...] indicates a statistically significant increase in South Africa’s TEA rate to 8.9% (up from 5.9% in 2009). This is more in line with the previous highest TEA rate of 7.8%, recorded in 2008. South Africa’s nascent entrepreneurship rate for 2010 was 5.1%, up from 3.6% in 2009. Given that South Africa is still experiencing the effects of the global recession, the increase in start-ups compared to last year is likely to be due to the stimulus of the **FIFA Soccer World Cup**, which South Africa hosted in June/July 2010 (the adult population data was collected in May and June of 2010).” (GEM, 2011d, 22).

19. “Given that South Africa hosted the **FIFA Soccer World Cup** in June/July 2010 and that the adult population data was collected in May and June of 2010, a number of questions were included in the survey to assess whether hosting this **large-scale sporting event** had any effect on entrepreneurial attitudes and aspirations. The responses are summarised in Tables 2.6 and 2.7. It is clear from Tables 2.6 and 2.7 that start-ups were more positive towards the **FIFA World Cup**, in terms of their general attitude towards it as well as the perceived effects on their businesses, than were new firms and established businesses. This adds credence to the view that the increase in South Africa’s nascent entrepreneurship rate to 5.1% (up from 3.6% in 2009) is likely to be due, at least in part, to the stimulus of the **FIFA Soccer World Cup**. The positive effect of the **FIFA World Cup** on new firms in terms of increased turnover and client numbers (Table 2.7) may well have contributed to the improvement in South Africa’s new firm rate (3.9% in 2010, compared to 2.1% in 2008 and 2.5% in 2009), by enabling more start-ups to survive beyond the first three months. In light of these findings, the results of the 2011 GEM survey will take on additional importance. It will be interesting to see whether the effects of the **FIFA World Cup** translate into a longer-term benefit for the business in South Africa, and fulfil the optimism expressed in Table 2.6.” (GEM, 2011d, 22).

20. “A significant majority (almost two-thirds) of early-stage entrepreneurial activity in South Africa is in the consumer services sector. Established business entities demonstrate a more balanced profile, with both the transformative and consumer services sectors well represented. The established business entities in the transformative sector have, in fact, doubled compared to the 2009 GEM survey. This is likely to be a spin-off from the huge investment in infrastructure developments in the lead-up to the **FIFA World Cup**. What is of concern, however, is that there are strong signs that this increase may not prove sustainable. According to an article in the Business Day (6 December 2010), the **World Cup** building frenzy has been replaced by a deep sense of gloom. It noted that construction activity had fallen by 50% in Gauteng since the **World Cup**, and by 40% in the Western Cape. Government spending and contracts, which many industry participants believed would see them through the post-**World Cup** period, have been slow to materialise. A Treasury report issued in November 2010 showed that provinces spent only 33% of their combined capital budgets from April to September 2010 (a drop of 24% compared to the same period for the previous year).” (GEM, 2011d, 26).

21. “The pattern with respect to established businesses has been somewhat different, with the consumer services sector no longer accounting for the majority of established business entities in 2010. Transformative businesses, of which construction businesses have been a key area of growth, account for 42.9% of established businesses (Table 5.1). The lead up to the 2010 **FIFA World Cup** saw a significant increase in construction activity in South Africa. With the **World Cup** construction needs now satisfied, the construction industry is struggling and, unless additional construction projects become available, the increase in importance of transformative businesses may not be a sustainable trend. The construction industry has the ability to absorb less- skilled employees and as South Africa needs up to R468bn to address the investment needs

of the roads and rail sector (Business Day, 2011/02/15), continued construction spending should boost this sector. An increase in transformative business entities was also apparent amongst early-stage business entities in 2010 (up from 16.4% in 2009). Again, particularly as the construction industry has been suffering setbacks since the end of the **FIFA World Cup**, it is questionable whether this increase indicates a change in the business environment in South Africa, or whether (and more likely) it simply reflects a short-term impact due to the **World Cup**.” (GEM, 2011d, 55).

22. “Respondents were asked whether the 2010 **FIFA World Cup** influenced their desire to improve or extend their existing business or start a new business, and whether they had actually improved or extended their existing business or started a new business. Twenty-seven percent of the respondents indicated in the affirmative and provided the following examples of **World Cup** driven initiatives: [1] expanded facilities [2] new product ranges incorporating a soccer theme [3] a focus on tourist-related products and services such as car rentals [4] trained more staff to be available for expected increase in clients, and [5] canvassed overseas realtors and/or relocated companies to acquire business globally.” (GEM, 2011d, 57).

23. “General economic concerns: The respondents raised concerns regarding the decrease in economic activity post the **World Cup**, and the impact of the recession on both domestic and global markets.” (GEM, 2011d, 57).

24. “GEM Scotland is an important - if often worrying - analysis of Scotland’s entrepreneurial position in the world. In entrepreneurial terms, we didn’t make it to the **World Cup**... In fact, the picture is worse than that. Opportunity perception (lower), perceived lack of funding, and fear of debt all played their parts in lowering our overall entrepreneurial activity rates over a long-term trend.” (GEM, 2010e, 3).

APPENDIX 4: INTERVIEW QUESTIONS

1. Background Information

- Please speak to me about the structure and composition of your organization and the MSE it oversaw.
- What was the scope of your organization's responsibilities pre and post award of MSE?
- What are the key objectives your organisation oversaw pre-award, during hosting, and post-hosting?
- Can you briefly describe the scope and duration of your role in the organising committee of the MSE?
- What were the primary objectives of hosting the MSE in your country?

2. Impact of MSE on Entrepreneurial Ecosystem

- Were there any objectives related to entrepreneurship as part of the objectives of hosting the MSE? Could you explain more? How were these objectives accomplished (any specific programs and initiatives)?
- What is your assessment of the impact of these programs and the realised outcomes?

3. Intentionality of Impact on EE

- As per the bid book, what were the key goals driving the planning for the MSE? Do you see any of these goals directly related to entrepreneurship? Why?
- How did you attain the goals related to entrepreneurship? How do you assess the effectiveness of how these goals were accomplished?
- Have you encountered any surprising impacts of the MSE? Could you explain more?

4. Measurement and Evaluation

- How do you measure the success of the MSE's when it comes to Entrepreneurship related goals and outcomes?
- What lessons have you learned from this experience that could be applied to future MSEs?

5. Conclusion

- Allow the interviewee to add any additional comments or thoughts.
- Thank the interviewee for their time and participation.