مجلة التنمية والسياسات الاقتصادية Journal of Development and Economic Policies

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Journal of Economic and Development Policies

التعريف بالمجلة

مجلة علمية فصلية محكمة تصدر عن المعهد العربي للتخطيط. وتعنى بنشر البحوث النظرية والميدانية في مجال علم الاقتصاد وسياسات التنمية الاقتصادية، بالإضافة إلى عروض الكتب والتقارير، ومتابعة الندوات والمؤتمرات وفعاليات العلمية المرتبطة بعلم الاقتصاد.

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A scientific journal published bi-annually by the Arab Planning Institute. The journal publishes theoretical and field research in economic policy development, in addition to book reports, seminar and conferences proceedings and events related to the field of economics.

الأهداف

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- تزويد صانعي القرار والممارسين والباحثين في الدول العربية بأحدث نتائج الدراسات التنموية في المجال الاقتصادي.
- خلق حوار علمي بناء بين الباحثين والمهتمين بالاقتصادات العربية وصناع القرار بالمنطقة.

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- Provide policy makers and researchers in the Arab word with the latest research results and recommendation in development and economic fields.
- Creating a constructive scientific dialogue between all stakeholders interested in the economic policy of the Arab world.

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- The journal publishes original research and studies (Arabic and English) that have not been previously published and were not submitted publication in other journals or periodicals.
- Studies submitted to the journal may not exceed 30 pages or 10000 words, including figures, illustrations, tables, references, and appendices.
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- تنشر المجلة الأبحاث والدراسات الأصيلة (باللغتين العربية والإنجليزية) والتي لم يتم نشرها سابقاً ولم تكن مقدمة للنشر في مجلات أو دوريات أخرى.
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مجلة التنمية والسياسات الاقتصادية

قائمة تصنيف بحوث العدد

التصنيف Code	لغة البحث Papers' Language	عنوان البحث Paper Tittle
اقتصاد Economics	عربي Arabic	**أثر إدارة المعرفة في تحقيق الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت** The Impact of Knowledge Management on Gaining a Competitive Edge in the Industrial Sector of the State of Kuwait
اقتصاد Economics	انجليزي English	Migration, Selection and Income Differentials in Brazilian Labor Market **الهجرة الداخلية، الاختيار وفوارق الدخل في سوق العمل البرازيلي**
اقتصاد Economics	انجليزي English	Does Supply-Leading Hypothesis Hold in Emerging Markets? Empirical Insights from a European Market **هل فرضية قيادة العرض صحيحة في الأسواق الناشئة؟ دلائل تجريبية من سوق أوروبية**

المحتويات العربية

افتتاحية العدد

يأتي العدد الثاني يوليو 2023 من المجلد الخامس والعشرين لمجلة التنمية والسياسات الاقتصادية التي يصدرها المعهد العربي للتخطيط مُحتوياً على ثلاثة بحوث منها بحث باللغة العربية، وبحثين باللغة الإنجليزية. تنوعت المجالات والإشكالات التي تعاملت معها البحوث المضمنة في هذا العدد، حيث استهل العدد ببحث من إعداد جاسم الشمري بعنوان "أثر إدارة المعرفة في تحقيق الأسبقيات التنافسية في قطاع الصناعة في دولة الكويت"، حيث هدفت الدراسة إلى الوقوف على ممارسات إدارة المعرفة وأثرها على تحقيق الأسبقيات التنافسية ضمن قطاع الصناعة الكويتي. ومن خلال بناء استبيان وتوزيعه على (251) من العاملين في منظمات القطاع الصناعي الكويتي، توصلت الدراسة إلى نتيجة مفادها أن هناك أثر ذو دلالة إحصائية لأبعاد إدارة المعرفة على تحقيق الأسبقيات التنافسية تراوحت بين المنخفض والمتوسط، حيث أثبتت الدراسة أن متغيري النشر والتطبيق كانا الأعلى تأثيراً مقارنة بمتغيري التوليد والتخزين. وبذلك توصي الدراسة بضرورة إعداد استراتيجيات وخطط تدريبية للأفراد العاملين وخصوصاً القادة حول أفضل الآليات المتبعة والحديثة من أجل نشر وتطبيق المعرفة وتحديداً أنظمة دعم القرار المستند إلى المعرفة والذكاء الاصطناعي، بالإضافة إلى توعية الأفراد العاملين حول أهمية الميزة التنافسية وضرورة تحقيق أسبقيات تنافسية من أجل ضمان سهولة مواجهة المنافسين في السوق.

وجاء البحث الثاني من إعداد لويس فيلهو واليكساندر مايا، تحت عنوان "الهجرة الداخلية، الاختيار وفوارق الدخل في سوق العمل البرازيلي"، حيث هدفت الدراسة إلى اختبار فرضية تحسن الانتقائية المواتية للقوى العاملة في البرازيل بناءً على نموذج تصحيح انحياز اختيار العينة لهيكمان (1979)، وبناءً على بيانات التعداد العام لعامي 2000 و2010، والهدف هو تحليل خصائص العاملين في سوق العمل البرازيلي بين سن 15 و60 سنة، وفي حال تم تأكيد فرضية اختيار المهاجرين بشكل إيجابي، يعني لديهم خصائص تؤثر على قرار الهجرة لا يمكن ملاحظتها. وتتمثل الخطوة الثانية في تحليل الخصائص التي تؤثر على فروق الدخل بين المهاجرين وغير المهاجرين مع الأخذ في الاعتبار تلك التي لها طبيعة ملحوظة وتلك غير الملحوظة، تظهـر النتائج أن المهاجرين البرازيـليين بين المـدن يشكلون مجموعة مختارة بشكل إيجابي. وفيما يتعلق بالدخل، تظهر فروق الدخل مواتية أكثر للمهاجرين، وتعزى النسبة الأكبر من هذه الفروق إلى عوامل لا يمكن ملاحظتها. لهذا تظهر هذه النتائج أن هجرة رأس المال البشري المؤهل في البرازيل، أي الذين يتمتعون بأفضل أداء مهني في سوق العمل وتم اختيارهم بشكل إيجابي قد يؤدي إلى تعميق التفاوتات الاجتماعية والاقتصادية الإقليمية لأن المهاجرين يبحثون دائماً عن فرص في المناطق الأكثر ديناميكية اقتصاديا. تستدعي هذه النتائج وضع سياسات للحد من التفاوتات الإقليمية بهدف تعزيز النمو في المناطق الأقل نموا بحيث تتاح الفرصة لرأس المال البشري للتطور داخلياً في مناطقهم مما يساعد في نمو المنطقة الأصلية وتنميتها.

أخيراً جاء البحث الثالث من إعداد فائزة برهوم وتوث جورجي، وعنوانه "هل فرضية قيادة العرض صحيحة في الأسواق الناشئة؟ دلائل تجريبية من سوق أوروبية"، حيث استهدف البحث دراسة العلاقة بين التطور المالي والنمو الاقتصادي، ومدى صحة فرضية قيادة العرض في المجر باستخدام بيانات السلاسل الزمنية السنوية خلال الفترة 1970-2019. ولاختبار فرضيات الدراسة، تم تطبيق نهج الانحدار الذاتي للفجوات الزمنية المتباطئة واختبار سببية جرانجر. حيث تظهر النتائج أن هناك علاقة بين التطور المالي والنمو الاقتصادي، لكن الأدلة على فرضية العرض الرائدة على المدى الطويل في المجر تتنوع وفقاً للقطاع. في حين أن التغيرات في نسب الائتمان للقطاع الخاص، في المدى القصير، قد تكون محدودة إحصائياً وليس لها أثر على النمو الاقتصادي. ووفقًا لاختبار جرانجر، هناك دليل يدعم فرضية الحياد لنسبة الائتمان إلى الشركات وفرضية التغذية الراجعة لنسبة الائتمان إلى الأسرة فيما يتعلق بالنمو الاقتصادي. وهذه نتيجة لانخفاض مستويات الكفاءة التي اتسم به النظام المالي الهنغاري، على الرغم من أنه يتسم بمستويات عالية من العمق المالي. إلى جانب ذلك، أدّى التحرير المالي والتنمية المالية إلى زيادة الاعتماد على التمويل الخارجي، ممّا تسبّب في هشاشة النظام المالي وتأثيره على دوره في النمو الاقتصادي. ويحتاج صانعو السياسات إلى استهداف القنوات وآليات الكفاءة المالية للتأثير على الاقتصاد الحقيقي وتحويله في جميع مناطق البلاد لتطوير الأهداف والنمو الاقتصادي معًا بشكل متساوٍ وضمان استقرار سياسات الاقتصاد الكلي.

رئيس التحرير

أثر إدارة المعرفة في تحقيق الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت

جاسم الجزاع الشمري

ملخص

هدَفت الدراسة الحالية إلى الوقوف على ممارسات إدارة المعرفة وأثرها على تحقيق الأسبقيات التنافسية ضمن قطاع الصناعة الكويتي. ومن خلال تبني المنهج الكمي، تم بناء استبيان وتوزيعه على (251) من العاملين في منظمات القطاع الصناعي الكويتي. توصلت الدراسة إلى نتيجة مفادها أن هناك أثر ذو دلالة إحصائية لأبعاد إدارة المعرفة على تحقيق الأسبقيات التنافسية تراوحت بين المنخفض والمتوسط، حيث أثبتت الدراسة أن متغيري النشر والتطبيق كانا الأعلى تأثيراً مقارنة بمتغيري التوليد والتخزين. وبذلك توصي الدّراسة بضرورة إعداد استراتيجيات وخطط تدريبية للأفراد العاملين وخصوصاً القادة حول أفضل الآليات المتبعة والحديثة من أجل نشر وتطبيق المعرفة وتحديداً أنظمة دعم القرار المستند إلى المعرفة والذكاء الاصطناعي، بالإضافة إلى توعية الأفراد العاملين حول أهمية الميزة التنافسية وضرورة تحقيق أسبقيات تنافسية من أجل ضمان سهولة مواجهة المنافسين في السوق.

The Impact of Knowledge Management on Gaining a Competitive Edge in the Industrial Sector of the State of Kuwait

Jassim AlJezza AlShammari

Abstract

The current study aimed at identifying the influence of knowledge management – KM - practices on achieving competitive priorities within the Kuwaiti industry sector. Through adopting the quantitative approach، a questionnaire was constructed and distributed on (251) workers within organizations of Kuwaiti industrial sector. Based on the statistical analysis SPSS، the study reached a conclusion that there is a statistically significant effect of the knowledge management dimensions on achieving competitive priorities، ranging from low to medium in significance. The study proved that the diffusion and application of knowledge had the highest effect compared to the generation and storage of knowledge. Thus، study recommended the necessity to train individuals within an organization، especially leaders، on the best and modern mechanisms used to defuse and apply knowledge، specifically knowledge-based decision support systems and artificial intelligence، in addition to educating individuals of the importance of competitive advantage and the necessity of achieving competitive priorities in order to ensure a proper exposure in the market.

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1. مقدمة

تمتّعت إدارة المعرفة بالكثير من الاهتمام على مدى الأعوام السّابقة وخصوصاً في أدبيّات الإدارة، شمل ذلك إدارة المعرفة وأثرها في الإدارة العامة والاقتصاد والعلوم التنظيمية وعلم الاجتماع والقانون والكثير من المجالات والقطاعات الحيوية (Schniederjanst et al, 2020). وأشار Elrod and Fortenberry (2020) أن إدارة المعرفة من الممكن أن تتحول وبشكل تَدريجي إلى مورد رئيسي للمنظمة نظراً لتطور العَولمة وأثرها في تطوير الكثير من المجالات المختلفة مثل الاتصالات وتكنولوجيا المعلومات، كما أكّد الباحث أن إدارة المعرفة واحدة من المفاهيم التي ساهمت في تأسيس بنية تحتيّة للكثير من القطاعات بالإضافة إلى تنمية مفهوم المنافسة وتغيير أحجام وهيكل المجالات الاقتصادية والاجتماعية. وكانت نتيجة هذه التغييرات – كما أشار لها Ode and Ayavoo (2020) و El–Emran et al (2020) – هو تغيير المزايا التنافسية للمنظمة من خلال تشكيل المعرفة بشكل أكثر وضوحاً والنظر إلى المنافسة من منظور إدارة المعرفة وكان ذلك من خلال التركيز على الممارسات والأساليب التي تستخدمها المنظمات من أجل إدارة المعرفة المتراكمة وتوطين أسس المنافسة.

وتنطلق الدراسة الحالية من فكرة أن العالم شهد وما زال يشهد تطوير لقوى لها تأثير كبير على المنظومة الاقتصادية والإدارية الامر الذي استدعى لتبني تغييرات استراتيجية تنظيمية أهمها العولمة التي أدّت لخلق تكنولوجيا متطورة وبالتالي زيادة حدة المنافسة. هذا الأمر – بشكل أو بآخر – استدعى لأن تكون المنظمة على أهبة الاستعداد لمواجهة التغيرات السريعة والاستجابة للتطورات المتعاقبة من أجل ضمان تكيف المنظمة في بيئتها وضمان استمراريتها. وتعد إدارة المعرفة واحدة من الاستراتيجيات المهمة التي تساهم في وضع المنظمة بصورة التطورات الكثيرة التي يشهدها العالم والمبنية على أن تكون المنظمة على علم ودراسة بكافة أشكال التطور الموجودة حالياً وتلك المتبناة من قِبَل منافسيها الأمر الذي يزيد من قدرها التنافسية.

من أجل تحقيق هدف الدراسة الحالية، فقد عمد الباحث إلى بناء أسئلة تُشكل اجاباتها التحقيق الفعلي لهدف الدراسة، وتمثّلت هذه الأسئلة فيما يلي:

1. كيف يمكن تفسير مفهوم إدارة المعرفة في المنظمات؟
2. ما أهم الممارسات المرتبطة بإدارة المعرفة التي لها أثر إيجابي في المنظمات؟
3. كيف يمكن تحديد الأسبقيات التنافسية التي سيتم إدخالها في العمليات الداخلية للمنظمة؟
4. ما أثر ممارسة إدارة المعرفة على الأسبقيات التنافسية في القطاع الصناعي لدولة الكويت؟

بناءً على الهدف والأسئلة السّابق طرحها، فإن الدراسة الحالية تسعى إلى ما يلي:

1. تفسير مفهوم إدارة المعرفة في المنظمات
2. أهم الممارسات المرتبطة بإدارة المعرفة التي لها أثر إيجابي في المنظمات
3. تحديد الأسبقيات التنافسية التي سيتم إدخالها في العمليات الداخلية للمنظمة
4. بيان أثر ممارسة إدارة المعرفة على الأسبقيات التنافسية في القطاع الصناعي لدولة الكويت

اعتمد الباحث على عبابسة وآخرون (2018) في بناء العلاقة بين ممارسات إدارة المعرفة وبُعد الأسبقيات التنافسية من خلال النموذج أدناه:

الشكل (1): نموذج الدراسة طالب وغالي (2010)، صويص وآخرون (2011)، عبابسة وآخرون (2018) وبوركوة (2012)
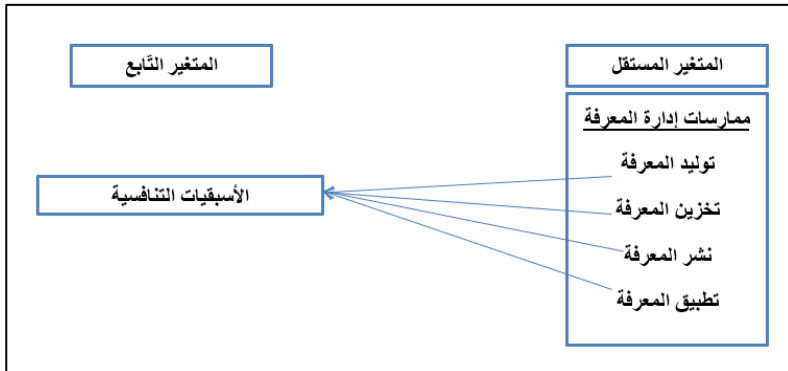
وفي النظر إلى النموذج (1) السَّابق، كان الباحث قادر على تطوير مجموع الفرضيات التالية:

الفرضية الرئيسية: يوجد علاقة ذات دلالة احصائية لممارسات إدارة المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت.

الفرضيات الفرعية:

الفرضية الأولى: يوجد علاقة ذات دلالة احصائية لتوليد المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت

الفرضية الثانية: يوجد علاقة ذات دلالة احصائية لتخزين المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت

الفرضية الثالثة: يوجد علاقة ذات دلالة احصائية لنشر المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت

الفرضية الرابعة: يوجد علاقة ذات دلالة احصائية لتطبيق المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت

تنبُع أهمية الدراسة الحالية من واقع أن إدارة المعرفة في المجال الصناعي لم يلقَ الاهتمام الكافي من الدراسة والتمحيص والتحليل، وذلك نظراً لصعوبة التطبيق وتشعب القطاع الصناعي لكثير من الصناعات المختلفة والتي تُشكل بتواجدها عصب الحياة للدول من مختلف المستويات. بالإضافة إلى ذلك، فانه – وحسب علم الباحث – تم التطرق إلى أثر إدارة المعرفة وممارساتها على الميزة التنافسية بشكل كافٍ إلا أن هناك قصور واضح في التعامل مع الأسبقيات التنافسية بطريقة منفصلة وكمتغير تابع ومن هنا ظهرت فكرة الباحث في تناول الأسبقيات التنافسية كمتأثر بدلاً من الميزة التنافسية.

2.1 مفهوم إدارة المعرفة

تظهر كلمة المعرفة وبشكل يومي في حياتنا، وهي من الامور التي يتم تداولها بشكل كبير سواء في الحياة الخاصة أو الحياة العامة والعملية (Zhuravlov et al, 2020). وتشير المعرفة حسب Alolayyan وآخرون (2020) إلى حالة الوعي والإلمام بالعديد من الأمور أو الأحداث أو الأفكار أو حتى أساليب وطرق عمل الأشياء. هذا وقد تناول الفلاسفة منذ القِدَم مفهوم المعرفة وأشاروا اليه على أنه "إيمان حقيقي مبرر"، أي أن وجود المعرفة في ذهن شخص ما تدفعه إلى الإيمان بها شريطة وجود مصدر مبرر وداعم لهذه المعرِفة (Maraqa et al, 2021).

مع مرور الوقت وازدياد زخم المعلومات التي تحصل عليها المنظمات سواء من عملياتها الداخلية والخارجية أو من تطبيقات تكنولوجيا المعلومات التي تعتمد عليها في أعمالها، فقد أصبح هناك حاجة لإدارة هذه المعلومات والتي بوجودها تكوّن "معرفة" لدى الأفراد. أي أن إدارة المعرفة حسب ما أورد Rezaei وآخرون (2020) هي نهج واضح يعزز من نظام الحصول على المعرفة وتخزينها ومشاركتها بناء على سياسات واستراتيجيات وأسس واضحة وجلية للأفراد من مختلف المستويات. ويؤكّد كل من Antunes and Pinheiro (2020) و Dalkir (2017) إلى أن هناك مجموعة من الاهداف لإدارة المعرفة تتمثل في: تسهيل عملية الحصول على المعرفة وتعزيز وإغناء بيئة المعرفة من أجل خلق بيئة معرفة تنظيمية، وتحويل المعرفة إلى أصل أساسي من اصول المنظمة القابلة للنقل و المشاركة، وتطبيق للمعارف التي يتم الحصول عليها بما من شأنه إثراء التعلم التنظيمي.

من خلال الاطلاع على الدراسات السابقة، فقد توصلنا إلى فكرة ان معظم هذه الدراسات وخصوصاً الحديثة منها اتفقت حول ثلاثة ابعاد رئيسية لإدارة المعرفة و تمثلت في (أ) البعد التكنولوجي Technology و هو طبيعة الأدوات التي تمتلكها المنظمة من أجل الحصول على المعرفة و تشمل التكنولوجيا الحديثة، الأجهزة الحاسوبية، محركات البحث المتعددة، قواعد البيانات الخاصة بها بالإضافة إلى رأس المال الفكري الذي تمتلكه المنظمة (,Manesh et al 2020)، (ب) البعد التنظيمي و اللوجستي Logistics و هو الآليات و الطرق التي تتبناها المنظمة

من أجل الوصول إلى المعرفة و طريقة تخزينها و حفظها و سهولة استرجاعها كوسيلة لتعزيز القدرات التنافسية لها لاحقاً (Friedrich et al, 2020; Ostling et al, 2018)، (ج) البعد الإجتماعي Social وهو الطرق و الخطط التي تقوم بها المنظمة بمشاركة المعرفة و توزيعها و الاستفادة منها بين مختلف اداراتها و أقسامها و طريقة تفاعل الأفراد مع هذه المعرفة و استغلالها من أجل منفعة المنظمة (Bittel et al, 2019).

يشير Hussinki وآخرون (2017a) إلى أن مفهوم إدارة المعرفة واسع الأبعاد و يدل على توافر معلومات و بيانات في المنظمة يلزم إدارتها و تسخيرها لخدمة عمليات المنظمة الانتاجية بالإضافة إلى إثراءها بما هو كفيل بأن تكون ذات منفعة و دلالة. اتفقت العديد من الدراسات على أن هناك مجموعة من الممارسات والتي يشكل تبنيها إدارة للمعرفة بطريقة او بأخرى ومن ضمنها (Shahzad et al, 2020; Hock–Doepgen et al, 2020; Abubakar et al, 2019): توليد المعرفة، تخزين المعرفة، نشر المعرفة، وتطبيق المعرفة.

2.2 الأسبقيات التنافسية Competitive Priorities

يعرّف Medeiros وآخرون (2020) الميزة التنافسية على أنها امكانية وقدرة المنظمة على أن تقدم سلعة أو خدمة أو منتج يتميز بتكلفة قليلة وجودة عالية مقارنة بغيره من المنتجات المماثلة في السوق والقدرة على الإحتفاظ بهذه الميزة. و حول مفهوم الأسبقيات التنافسية يشير Durugbo وآخرون (2020) إلى أن هذا المفهوم يشير إلى العناصر او الأبعاد التي لها القدرة على التأثير بشكل مباشر في استراتيجية المنظمة و أداءها في مجال التنافسية السوقية و زيادة قدرتها على التفوق على المنافسين.

الأسبقيات التنافسية هي بجوهرها عبارة عن أبعاد تشغيلية يلزم أن تتواجد في العمليات الدّاخلية للمنظمة من أجل خلق قيمة لتلك العملية الدّاخلية وبالتالي زيادة قدرتها على تحسين جودة المنتج أو الخدمة وبالتالي ارضاء العميل الداخلي والخارجي. و من الجدير بالذكر أنه ليس جميع العناصر أو الأبعاد للأسبقية التنافسية مهمة جداً و ذات أثر كبير، إلا أنه سيتم استعراض أدناه أكثر العناصر أو الأبعاد أهمية في الأسبقيات التنافسية و تشمل Idris and Naqshbandi

(2019) Sayem، و آخرون (2018) Javanrad، و آخرون (2017) و Minbaeva (2018): انخفاض الكلفة Low Cost، الجودة Quality، وقت التسليم Delivery، المرونة Flexibility

2.3 الدّراسات السّابقة

عبابسة و آخرون (2018)، فقد تناولوا أثر أبعاد إدارة المعرفة على الميزة التنافسية وتم التطبيق على عينة (40) فرد من العاملين في شركة سوف للدقيق بالوادي، و تمخضت الدراسة عن نتيجة مفادها أن إدارة المعرفة و تحديداً نشر المعرفة و تطبيقها لها أثر كبير على زيادة مستوى الميزة التنافسية للمنظمة من خلال لعلاقة المعنية التي جمعت بين نشر المعرفة و تطبيقها و متغير مدة التسليم و الجودة في الميزة التنافسية. ويشير Mahdi وآخرون (2019) في دراسته إلى أن التعامل مع المعرفة وإدارتها أمر ضروري جداً، وهي الطريقة الأمثل للحصول على ميزة تنافسية مستدامة (SCA) في السوق. هدف الباحثون في هذه الدراسة للوقوف على أثر إدارة المعرفة وعملياتها على الميزة التنافسية، وبالاعتماد على المنهج الكمي، استجاب (525) فرد من (44) جامعة عراقية على الاستبيان. وأظهرت نتائج الدراسة وجود أثر كبير لممارسات إدارة المعرفة على تحقيق الاستدامة في الميزة التنافسية وتحديداً من خلال توليد وتخزين وتبادل المعرفة. أما دراسة de Guimaraes وآخرون (2018) فقد هدفت إلى بيان تأثير الدوافع الإستراتيجية (توجيه ريادة الأعمال، توجيه السوق وتوجيه إدارة المعرفة) على الميزة التنافسية المستدامة، وتم التطبيق على 1774 مؤسسة صغيرة ومتوسطة في جنوب البرازيل في قطاعات الصناعة التحويلية، والتجارة والخدمات. أظهرت النتائج أن هناك تأثيرًا قويًا سابقًا للمحركات الإستراتيجية على الميزة التنافسية المستدامة من خلال التركيز على ممارسات إدارة المعرفة من أجل زيادة الميزة التنافسية.

وهدفت دراسة (Abu-Rumman (2018 إلى الوقوف على العوامل المختلفة التي تساعد أو تعيق تحقيق الميزة التنافسية من خلال امتلاك رأس المال الفكري وتنميته وإيصال إدارة المعرفة الفعالة في عينة من الجامعات الأردنية. باستخدام المنهجية الكمية المدعومة بنهج نظري براغماتي، تم إجراء مسح إلكتروني مع موظفين يعملون في ثلاث جامعات قائمة في الأردن. أثبتت الدراسة

أن إدارة رأس المال الفكري مبني على تبني أسس وأطر صحيحة لإدارة المعرفة الأمر الذي من شأنه التأثير إيجاباً على الميزة التنافسية وفرصها في المنظمة.

3. منهجية الدّراسة

اعتمد الباحث في الدراسة الحالية على المنهجية الكمية في جمع المعلومات والتي تقوم على جمع معلومات رقمية ذات علاقة بمتغيرات الدراسة ومن ثم ترجمة هذه الأرقام إلى نتائج مقروءة ومفهومة. وبالتالي قد تبنى الباحث ممارسات (أبعاد) إدارة المعرفة التي تم طرحها من قبل عبابسة وآخرون (2018) ومن ثم ربطها – كما في الشكل 1 – بعلاقة مع متغير الأسبقيات التنافسية من أجل الوصول إلى هدف الدراسة.

3.1 أداة الدراسة

تم توظيف أداة الاستبيان من أجل الحصول على البيانات الأولية من أفراد عينة الدراسة من خلال بناء استبيان مكون من شقين، الأول تم استعراض فيه الأبعاد الديموغرافية لعينة الدراسة والتي شملت (العمر، الجنس، المؤهلات الأكاديمية والخبرة)، والشق الثاني تم طرح فيه أسئلة تتعلق بأبعاد إدارة المعرفة (توليد، تخزين، نشر وتطبيق) بالإضافة إلى الأسبقية التنافسية، وقد تم بناء الاستبيان بناءً على مقياس ليكرت الخماسي حيث أن (5 أوافق بشدة، 4 أوافق، 3 محايد، 2 لا أوافق، 1 لا أوافق بشدة

3.2 المعالجة الإحصائية للبيانات

تكون مجتمع الدراسة من مجموع العاملين في القطاع الصناعي في دولة الكويت والذي وصل مجموع مجتمعه إلى (70766) فرد. وقد تم تبني عينة ملائمة مكونة من (251) فرد من أجل تمثيل المجتمع المذكور سابقاً. من أجل بيان صدق وثبات أداة الدراسة وصلاحيتها للإستخدام فقد تم أولاً عرض الاستبيان على مجموعة من المختصين والاساتذة الجامعيين من أجل التحكيم حيث تم إجراء التعديلات اللازمة وفقا لملاحظاتهم قبل توزيع الاستبانة على العينة النهائية، وقد وصل عدد أسئلة الاستبيان في نسخته الأخيرة إلى (31) سؤال. بالإضافة إلى ذلك، و بعد جمع البيانات

قام الباحث باستخدام اختبار كرونباخ ألفا من أجل اختبار ثبات الاستبانة حيث كان الأنسب والأكثر ملائمة لأهداف الدراسة خصوصاً بوجود اختبار تحصيلي، حيث تبين أن قيمة ألفا بالنسبة لكل متغير من متغيرات الدراسة أعلى من النسبة المقبولة 0.60 وبما يدل على ثبات الاستبانة(Sekaran & Bougie, 2016).

تم الاعتماد على الحزمة الاحصائية للبحوث الاجتماعية SPSS من أجل فرز وتحليل ومعالجة البيانات التي تم تحصيلها من أفراد عينة الدراسة.

3.3 تحليل العوامل الديموغرافية

تم حساب التكرارات والنسب المئوية للمتغيرات الديموغرافية لأفراد عينة الدراسة، وأظهرت نتائج التحليل ان 67.7% من العينة من الذكور والباقي من الاناث، أما فيما يتعلق بمتغير العمر فقد تبين أن 38.2% من العينة تتراوح أعمارهم ما بين 30-35 سنة، و 21.1% من العينة تتراوح أعمارهم بين 36-40 سنة. أما المؤهل العلمي فقد تبين أن 46.6% من العينة يحملون مؤهل بكالوريوس و31.9% من حملة الدراسات العليا. كما تبين أن 39% من العينة تتراوح خبرتهم ما بين 16-20 سنة، و27.5% من العينة تتراوح خبرتهم ما بين 11-15 سنة.

4. عرض نتائج الدراسة

لتحديد مستوى تقديرات عينة الدراسة، تم احتساب المقياس المستخدم حسب المعادلة الرياضية (الحد الأعلى للمقياس – الحد الأدنى من المقياس) / عدد الفئات المطلوبة وتصبح المعادلة كالتالي (1-5)/3 = 1.33. حيث يصبح المعيار الاحصائي المستخدم لتقدير مستويات المتوسطات الحسابية لإجابات مفردات العينة كالتالي (Sekaran & Bougie)،2016:

- من 1 إلى 2.33 (درجة منخفضة).

- من 2.34 إلى 3.67 (درجة متوسطة).

- من 3.68 إلى 5 (درجة مرتفعة).

ولقد تم استخراج المتوسط الحسابي والانحراف المعياري لوصف إجابات العينة نحو فقرات الاستبانة، وفيما يتعلق بمتغير توليد المعرفة فقد أشارت النتائج إلى أن المتوسط العام لمتغير (توليد المعرفة) يعكس درجة موافقة مرتفعة على المتغير، كما تبين أن اتجاهات العينة إيجابية نحو فقرات المتغير في الاستبيان وذلك لأن متوسطاتها الحسابية أكبر من متوسط أداة القياس (3). بالنسبة لمتغير (تخزين المعرفة وتطبيق المعرفة) فقد أثبتت نتائج التحليل أن المتوسط العام للمتغير يعكس درجة موافقة مرتفعة على المتغير، كما تبين أن اتجاهات العينة إيجابية نحو فقرات المتغير في الاستبيان وذلك لأن متوسطاتها الحسابية أكبر من متوسط أداة القياس (3) وكانت النتيجة أيضاً مماثلة في تحليل استجابة أفراد العينة نحو متغير (نشر المعرفة) والذي أكّد وجود موافقة مرتفعة وذلك أن متوسط الاستجابات أكبر من متوسط أداة القياس. وعلى نفس الوتيرة، فقد أظهر المتوسط الحسابي والانحراف المعياري للمتغير التابع (الاسبقيات التنافسية) أن مستوى الاجابة كان مرتفعاً، حيث كان المتوسط للإستجابات أعلى من متوسط المقياس الأمر الذي يُعد ايجابياً من ناحية إحصائية.

4.1 اختبار فرضيات الدّراسة

الفرضية الرئيسية:

"يوجد علاقة ذات دلالة احصائية لممارسات إدارة المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت"

لقد تم استخدام اختبار الانحدار المتعدد لاختبار الفرضية أعلاه حيث تم التوصل إلى النتائج التالية:

الجدول (1): نتائج اختبار الفرضية الرئيسية

جدول المعاملات						تحليل التباين			ملخص النموذج		
Sig t	T	Beta	الخطأ المعياري	B	البيان	Sig F	درجة الحرية	F المحسوبة	R^2 معامل التحديد	R معامل الارتباط	المتغير التابع
.000	4.706		.175	.823	الثابت		4	84.651	0.579	0.761	
.000	4.041	.251	.048	.195	توليد المعرفة		246				
.009	3.316	.205	.065	.186	تخزين المعرفة	*0.000					الأسبقيات التنافسية
.000	4.698	.316	.075	.354	نشر المعرفة		250				
.000	7.313	.371	.047	.343	تطبيق المعرفة						

* يكون التأثير ذا دلالة إحصائية عند مستوى ($\alpha \leq 0.05$)

يشير الجدول أعلاه إلى نتائج اختبار الانحدار المتعدد للفرضية الرئيسية، حيث نلاحظ أن معامل ارتباط بيرســـون يبلغ 0.761 يعكس قوة ارتباط عالية، كما نلاحظ من قيمة معامل التحديد البالغة 0.579 أن المتغيرات المستقلة تفســر ما نسبته 57.9% من التغير في المتغير التابع. وبلغت قيمة F المحســوبة 97.128 ذات دلالة عند مســـتوى 0.05، وهذا يعكس معنوية الانحدار.

كما تم التوصل إلى ما يلي:

- **الفرضـــية الأولى:** لقد تبين أن قيمة t ذات دلالة عند مســـتوى 0.05، وقيمة beta (0.251) تعكس درجة تأثير **منخفضـــة**، مما يدل على وجود علاقة ذات دلالة احصـــائية لتوليد المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت..
- **الفرضية الثانية:** لقد تبين أن قيمة t ذات دلالة عند مستوى 0.05، وقيمة beta (0.205) تعكس درجة تأثير **منخفضـــة**، مما يدل على وجود علاقة ذات دلالة احصـــائية لتخزين المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت
- **الفرضـــية الثالثة:** لقد تبين أن قيمة t ذات دلالة عند مســـتوى 0.05، وقيمة beta (0.316) تعكس درجة تأثير **متوســـطة**، مما يدل على وجود علاقة ذات دلالة احصـــائية لنشـــر المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت

- **الفرضيـة الرابعة:** لقد تبين أن قيمة t ذات دلالة عند مسـتوى 0.05، وقيمة beta (0.371) تعكس درجة تأثير **متوسـطة**، مما يدل على وجود علاقة ذات دلالة احصـائية لتطبيق المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت

- وبالتالي تم التوصـل إلى قبول الفرضـية التي نصـهـا:" يوجد علاقة ذات دلالة احصـائية لممارسات إدارة المعرفة على الاسبقيات التنافسية في قطاع الصناعة في دولة الكويت ".

4.2 مناقشة النتائج

هدفت الدراسة الحالية لبيان أثر إدارة المعرفة بأبعادها وممارساتها (توليد المعرفة، تخزين المعرفة، نشر المعرفة، وتطبيق المعرفة) على تحقيق الأسبقيات التنافسية للمنظمات (الجودة، الكلفة، التسليم، المرونة) ضمن قطاع المنظمات الصناعية الكويتية في دولة الكويت. وبالاعتماد على المنهج الكمي ومن خلال توظيف الاستبيان تم جمع آراء (251) فرد من منظمات القطاع الصناعي في الكويت. وتوصلت الدراسة إلى مجموع النتائج التالية:

- ثبت أن مستوى تطبيق أبعاد وممارسات إدارة المعرفة في القطاع الصناعي الكويتي مرتفع نسبياً وذلك وفقاً لاستجابات أفراد العينة

- أظهرت النتائج وجود وعي ضمن الأفراد الذين استجابوا للإستبيان حول مفهوم إدارة المعرفة بأبعادها والذي جاء أيضاً مرتفع بالنظر إلى المتوسطات الحسابية لمفردات الاستبيان والتي حققت أعلى من المتوسط الحسابي للمقياس 3.00.

- حققت الدراسة هدفها الرئيسي وتم إثبات من خلال التحليل أنه يوجد علاقة ذات دلالة إحصائية لممارسات إدارة المعرفة على الأسبقيات التنافسية في قطاع الصناعة في دولة الكويت

- ثبت من خلال الدراسة أن هناك أثر لأبعاد المعرفة تراوحت من المتوسط والمنخفض، حيث كان متغيري توليد وتخزين المعرفة ذو أثر منخفض على الأسبقيات التنافسية في حين ثبت أن متغيري النشر والتطبيق كانا ذو أثر متوسط.

4.3 أبعاد إدارة المعرفة لها أثر إيجابي على تحقيق الأسبقية التنافسية للمنظمات

أثبتت الدراسة أن إدارة المعرفة من خلال أبعادها المختلفة وارتباطها بأثر واضح على الميزة التنافسية كانت قادرة على إعطاء المنظمة نوع من التفوق الكمي والنوعي (بالاعتماد على المعلومات والبيانات المتواجدة) وبالتالي الوصول إلى حالة من الأفضلية على المنافسين، من هنا، فإن إدارة المعرفة أتاحت للمنظمة فرصة لحصد أسبقيات تنافسية ساهمت في تعظيم قدرتها التنافسية وبالتالي تحقيق أداء أفضل وأعلى وحصة سوقية أكبر وهذا ما توافق مع كل من (طالب وغالي، 2010). من جهة أخرى، فقد أكّدت الدراسة أن الآثار الإيجابية لإدارة المعرفة تمثلت في تعزيز قوة المنظمة في الوصول إلى الموارد المعرفية الموجودة لديها من مهارات وقدرات الموظفين، خبرات وجدارات الأفراد العاملين إضافة إلى البيانات والمعلومات التي من الممكن الوصول اليها من خلال التكنولوجيا الحديثة كالإنترنت. الوصول لهذه المعارف كان من ضمن الأسس التي اعتمدت عليها المنظمة في تصنيف مهارات وقدرات المنافسين والعمل ضمن استراتيجية تضمن أن تكون المنظمة دائماً في المقدمة من خلال الاطلاع على معلومات المنافسين، حملات الترويجية، الجودة في المنتجات والخدمات التي يقدموها والقدرة على ارضاء العميل. وفي حال اطلاع المنظمة على هذه المعارف يكون بإمكانها أن تواكب تطور باقي المنظمات المنافسية وسد الفجوة الموجودة بينها وبين المنافسين من خلال تطوير المجالات السّابق ذكرها والوصول إلى مستوى أعلى من الجودة، والمرونة وانخفاض الكلفة وسرعة التسليم، وهذه فعلياً أهم الأسبقيات التنافسية التي من الممكن أن تحصل عليها المنظمة. هذا الأمر كان متوافقاً مع ما ورد ضمن دراسة وصويص وآخرون (2011) عندما أكّدوا أن أبعاد إدارة المعرفة من توليد ونشر وتخزين وتطبيق للمعرفة يساهم في إثراء الوعي المنظمي حول أسبقيات المنافسين وبالتالي مواكبة تلك الأسبقيات بأسلوب إبداعي ذكي. من ناحية أبعاد إدارة المعرفة التي تم طرحها مسبقاً، فقد أوجدت الدراسة أن أبعاد إدارة المعرفة لها أثر واضح على الميزة التنافسية والتي تقود إلى الكشف عن الأسبقيات التنافسية وتعزيزها وتقويتها مما من شانه النهوض بأداء المنظمة من خلال أثر متغير (نشر المعرفة)، حيث أكّدت النتائج أن أبعاد إدارة المعرفة تكون أكثر فاعلية في حال أن تم الاعتناء بمتغير (تطبيق المعرفة) من خلال السيطرة على العوائق والمعوقات بين الموظفين والإدارة والقيادة في تطبيق ونقل المعرفة ضمن الهيكل التنظيمي للمنظمة.

4.4 يؤثر نشر المعرفة في درجة تحقيق الأسبقيات التنافسية

كما أثبتت الدراسة أن نشر المعرفة و تطبيقها كان له أثر كبير على أداء المنظمة من ناحية توجيه الأفراد العاملين و دفعهم نحو تقديم أداء أعلى الأمر الذي من شأنه أن يعظم من مستوى الجودة في الخدمات المقدمة و التأثير على الجودة المدركة للعميل و بالتالي العمل على نيل رضا العملاء، هذا توافق مع كل عبابسة و آخرون (2018) و de Guimaraes و آخرون (2018) عندما أكدوا أن نشر المعرفة و تطبيقها في كافة أقسام و إدارات المنظمة تجعل الأداء في حالة توازن قابل للتطور، كما أنها تحفز على تطوير أداء الأفراد والذي ينعكس على أداء المنظمة بشكل عام.

إن الاستمرار في توليد المعرفة ونشرها وتطبيقها وتخزينها له أثر إيجابي بالغ في دفع المنظمة نحو البحث عن التقدم والتطور، أو كما أشار Abu-Rumman (2018) بان المعرفة بكافة ممارساتها تقدم المادة الخام للبحث والتطوير للمنظمة ومنها تتطبق للوصول إلى نتائج قادرة على تحقيق أسبقيات تنافسية مواكبة لتطورات السوق المحلية والعالمية. كما أكّدت الدراسة ما جاء به Shahzad وآخرون (2020) هو أن إدارة المعرفة بكافة ممارساتها لها القدرة على الكشف عن موارد المنظمة الخفية كالمواهب و المهارات والقدرات و الجدارات الموجودة لدى الأفراد العاملين و بالتالي خلق مورد إبداعي جديد و ديناميكية حركية للمنظمة و عملياتها الدّاخلية.

من ناحية أخرى، فإن نتائج الدراسة الحالية ونتائج الدراسات السابقة التي تم استعراضها سابقاً تشير إلى أن هناك علاقة وطيدة بين إدارة العرفة بأبعادها والأسبقيات التنافسية للمنظمة وهذه العلاقة إيجابية وذات أثر طردي، أي أنه كلما زاد اهتمام المنظمة بالمعرفة وإدارتها كلما حققت المزيد من الأسبقيات التنافسية. وهذا الأمر توافق مع Mahdi وآخرون (2019) الذي أشار إلى أن إدارة المعرفة تشكل المبدأ الأساسي للميزة التنافسية من خلال توجيه المنظمة نحو كيفية استغلال أسبقياتها التنافسية بالاعتماد على المعلومات المتوافرة لديها وذلك لتحقيق أسبقية تنافسية مستدامة. بالإضافة إلى ذلك، فإنه وحسب نتائج الدراسة الحالية فإن إدارة المعرفة كانت قد جعلت من المهارات والقدرات والجدارات المنظمية مصدر للمعرفة والذي يلزم تخزينه وتطبيقه ونشره، أي أن إدارة المعرفة أدت إلى جعل الكفاءات الأساسية للمنظمات أقوى من ذي قبل، لذلك، كانت

أقدر على تحقيق أسبقيات تنافسية أكثر استدامة حسب ما أورد أيضاً Abubakar وآخرون (2020).

نرى من خلال الدراسات السابقة ونتائج الدراسة الحالية أن المعرفة في المنظمات هي فعلياً أصل استراتيجي تشمل مجموع المهارات والقدرات والجدارات في المنظمة وهي بطبيعتها – في حال أن حافظت عليها المنظمة – صعبة النسخ والتسويق لأنها نادرة وموجودة لدى الأفراد ووجودها مقرون بوجودهم. لذا فإن المعرفة الموجودة في المنظمة تكون على مستوى عالٍ من الأهمية في حال أن كان بمقدور المنظمة استخدامها لبناء معارف أخرى أو ضمان تكامل المعرفة الموجودة فيها حالياً وهو ما تم تأكيده سابقاً من قبل Idris and Naqshbandi (2019) , Lin and Sayem وآخرون (2018), Javanrad وآخرون (2017) و Minbaeva (2018).

5. الخاتمة والتوصيات

يمكن القول أن ذكاء المنظمة في إدارة معرفتها من الممكن أن يقود إلى تنمية الاسبقيات التنافسية الموجودة حالياً و تعظيم حجم الميزة التنافسية الموجودة لديها من خلق فرص جديدة للمعرفة و تنمية أدائها بناءً على مقارنة نفسها مع نظرائها لإزالة الفجوة الموجودة بينهم. علاوة على ذلك، فإن نظام المعلومات، وهو أحد عوامل نظام إدارة المعرفة (KMS) يدعم الكفاءات التنظيمية. بشكل عام، يمكن لإدارة المعرفة وتطبيقها دعم المنظمات للحصول على أسبقيات قابلة للتطبيق ضد المنافسين. إن الميزة التنافسية تعتبر من أهم العوامل التي من شأنها دفع عجلة التنمية المنظمية ومساعدة المنظمة للوصول إلى التميز المنظمي من خلال التركيز على تطوير جميع أبعاد الميزة التنافسية من أجل خلق أسبقيات تنافسية للمنظمة وبالتالي ضمان قدرتها على البقاء أمام منافسيها. أي أن الأسبقيات التنافسية هي فعلياً الحالة التي تكون فيها المنظمة متمكنة من ميزتها التنافسية ولها القدرة التنافسية الكاملة من أجل الاطلاع على الأوضاع السوقية ومواجهة التحديات التنافسية المختلفة وتذليل الصعوبات أمامها من أجل ضمان استمراريتها بين المنظمات الأخرى والتي تعتبر منافسة لها. كل ما سبق ذكره من الممكن تحقيقه في حال أن كانت المنظمة قادرة على إدارة المعرفة الموجودة لديها، وهذه المعرفة لا تشمل فقط الدراسات والبحوث التي يتم عملها حول المنافسين

في السوق، بل أيضاً المهارات والقدرات والمعارف والمواهب الموجودة لدى الأفراد العاملين. أي أن المنظمة ليس مطلوب منها فقط أن تقوم بمعالجة وتخزين والاستفادة من المعارف التي تصل اليها من البيئة الخارجية، بل يلزم عليها أن تستغل المعارف الداخلية الموجودة لدى الأفراد العاملين من أجل استغلال مواهبهم ومهاراتهم بما يصب في مصلحة المنظمة وما هو قادر على تنمية أسبقياتها التنافسية. بناءً على التحليل والنتائج السابق عرضها، فإن الدراسة الحالية توصي بما يلي:

- يلزم من المنظمات تذليل كافة الصعوبات أمام وصول المعرفة للأفراد العاملين كوسيلة للسمو بمستوى الأداء وتحسين المخرجات التنظيمية داخل المنظمة.

- إعداد استراتيجيات وخطط تدريبية للأفراد العاملين وخصوصاً القادة حول أفضل الآليات المتبعة والحديثة من أجل نشر وتطبيق المعرفة وتحديداً أنظمة دعم القرار المستند إلى المعرفة والذكاء الاصطناعي

- الاستمرار بعقد الدورات التدريبية التي تتعلق بأهمية إدارة المعرفة وسبل المحافظة عليها وتوظيفها في العمليات الداخلية للمنظمات.

- ضرورة ربط ممارسات إدارة المعرفة بالعاملين في قطاع الصناعة لضمان تنفيذها على النحو المطلوب.

- العمل على وضع ضوابط فعالة للرقابة على آلية تطبيق ممارسات إدارة المعرفة في القطاع الصناعي.

- الاهتمام بتوفير منتجات بجودة عالية مع عدد أقل من العيوب لتمكين الشركة من المنافسة عبر استراتيجية قيادة التكلفة من خلال تقليل وقت الإعداد وتكلفة التصنيع.

- الاهتمام بتقديم المنتجات عالية الجودة مما سيزيد من زيادة ولاء العملاء للعلامات التجارية ومساعدة الشركة على تمييز نفسها عن الآخرين في قطاعات السوق التنافسية.

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English Content

Migration, Selection and Income Differentials in Brazilian Labor Market

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Abstract

Migration is understood in the economic literature as a decision based on prospects of better working conditions and the search for higher remuneration at the destination, compared to the origin of the workforce. In this sense, this article aims to test the hypothesis of favorable migratory selectivity in Brazil based on the model with sample selection bias correction proposed by Heckman (1979). Based on census information for the years 2000 and 2010, the aim is to analyze the population aged between 15 and 60 years who declared themselves to be employed in the Brazilian labor market. Suppose it is confirmed that migrants are a positively selected population group. In that case, they have unobservable characteristics that affect the decision to migrate and, consequently, labor earnings. The second step is to decompose the characteristics that affect the earnings differentials between migrants and non-migrants, considering those of an observable and non-observable nature. The results show that Brazilian intercity migrants make up a positively selected group. Concerning the breakdown of income differentials, labor income is more remarkable in favor of migrants, and the largest share of income differences between migrants and non-migrants is due to unobservable factors. Therefore, the implications of this study show that the migration of qualified human capital in Brazil, that is, those with the best professional performance in the labor market (positively selected), may end up deepening regional socioeconomic inequalities since migrants always seek opportunities in more economically dynamic regions. This suggests that policies be developed to reduce regional inequalities that aim, above all, to boost the growth of less developed regions so that their human capital has the opportunity to develop internally in their regions, contributing to the growth and development of the original region.

الهجرة الداخلية، الاختيار وفوارق الدخل في سوق العمل البرازيلي

لويس فيلهو
اليكساندر مايا

ملخص

تعرف الأدبيات الاقتصادية الهجرة الداخلية على أنها قرار يعتمد على احتمالات تحسين ظروف العمل والدخل. تهدف المقالة الى اختبار فرضية تحسن الانتقائية المواتية للقوى العاملة في البرازيل بناء على نموذج تصحيح انحياز اختيار العينة لهيكمان (1979) وبناءً على بيانات التعداد العام لعامي 2000 و2010. الهدف هو تحليل خصائص العاملين في سوق العمل البرازيلي بين سن 15 و60 سنة. في حال تم تأكيد فرضية اختيار المهاجرين بشكل إيجابي، في هذه الحالة لديهم خصائص تؤثر على قرار الهجرة لا يمكن ملاحظتها. وتتمثل الخطوة الثانية في تحليل الخصائص التي تؤثر على فروق الدخل بين المهاجرين وغير المهاجرين مع الاخذ في الاعتبار تلك التي لها طبيعة ملحوظة وتلك غير الملحوظة. تظهر النتائج أن المهاجرين البرازيليين بين المدن يشكلون مجموعة مختارة بشكل إيجابي. وفيما يتعلق بالدخل، تظهر فروق الدخل مواتية أكثر للمهاجرين، وتعزى النسبة الأكبر من هذه الفروق الى عوامل لا يمكن ملاحظتها. لهذا تظهر هذه النتائج أن هجرة رأس المال البشري المؤهل في البرازيل، أي الذين يتمتعون بأفضل أداء مهني في سوق العمل وتم اختيارهم بشكل إيجابي قد يؤدي الى تعميق التفاوتات الاجتماعية والاقتصادية الإقليمية لأن المهاجرين يبحثون دائما عن فرص في المناطق الأكثر ديناميكية اقتصاديا. تستدعي هذه النتائج وضع سياسات للحد من التفاوتات الإقليمية بهدف تعزيز النمو في المناطق الأقل نموا بحيث تتاح الفرصة لرأس المال البشري للتطور داخليا في مناطقهم مما يساعد في نمو المنطقة الأصلية وتنميتها.

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1. Initial Considerations

Labor income differentials in the economic literature are analyzed in diverse ways and assume the most diverse possible hypotheses. Socioeconomic and demographic characteristics, however, have a relevant position in discussions that deal with inequalities in earnings from work around the world (Blinder, 1973; Bergman, 1974; 1986; Hirsch & Schumacher, 1992; Blau & Kahn, 2003; Neuman & Oaxaca, 2003; Basker, 2003;). Investment in human capital is the primary determinant of wages and is attributed to educational inequalities, a substantial portion of income differentials in the labor market, but associated with the low level of human capital; unobservable characteristics also reveal impacts on wage differentials (Ramalho, 2005; Freguglia, 2007).

Human capital and its characteristics associated with the low performance gained substantial support to justify income inequality in Brazil in the 1960s, 1970s, and 1980s, this being the central core of the discussion on inequality (Langoni, 1973; Amadeo et al.,1994; Netto Junior et al., 2008; Rocha et al., 2010). However, the empirical evidence from these years suggests that some inequality is associated with low human capital. However, it is not just this variable associated with inequality. Thus, several socioeconomic and demographic characteristics substantially impact this issue.

As a result, not only socioeconomic characteristics but also productive attributes can impact the population's labor earnings differentials, as well as income inequality (Figueiredo et al., 2012; Cavalcanti & Ramos, 2015). Empirical evidence for Brazil shows that self-effort from individual productive attributes is extremely important for the population's income differentials. Furthermore, the individual productive attribute attenuates the impacts of such inequalities when one considers that, even with the same chances, the results may be different, related to individual product characteristics or socially fair inequality (Rawls, 1971).

Empirical evidence has shown that individuals with the same levels of education face substantial barriers in the labor market. When employed, they earn incomes lower than those received by their peers (GAMA & MACHADO, 2014). These socioeconomic and demographic conditions that affect differentials in earnings from work express that a substantial portion of inequality may be related to characteristics other than just training and investment in human capital (Justo & Silveira Neto, 2008; Maciel & Hermeto, 2011).

These characteristics are partially observed since age, sex, education, region and sector of occupation, as well as the condition of residence and migration, among others, have a decisive role in the wage determination process (Maciel & Hermeto, 2011; Gama & Hermeto, 2017). However, unobservable characteristics affect earnings differentials, and only a portion of studies in the most recent economic literature, especially the empirical one, has been responsible for addressing such aspects and their impact on wage inequalities around the world (Heckman, 1976; 1979; Neuman & Silber, 1996; Oaxaca & Ramson, 1998; Neuman & Oaxaca, 2005). As a result, non-observable individual productive attributes

should be addressed in empirical studies that address the issue of inequality from the perspective of individuals' socioeconomic characteristics alone.

In the discussions that guide the neoclassical theory on migration, in a large number of necessary empirical studies, this phenomenon is treated from the perspective of individual decision, and it is the unobservable characteristics of individuals that make them a positively selected group of the population of a country (Sjaastad, 1962; Taylor, 1999). This sample of the population is not random, and unobservable characteristics make them more likely to migrate and, consequently, more likely to earn higher incomes from work than their non-migrant counterparts since these unobservable attributes may also contain unobservable productive characteristics. Observables higher than that of non-migrants.

From this point of view, not only do the socioeconomic and demographic characteristics of the population confer higher earnings from work than migrants, but there are unobserved components capable of enabling them to obtain higher earnings. These unobservable characteristics of the population affect wage inequalities; even with the same levels of education, occupied in the same sectors of activities, and with similar demographic characteristics, income differences persist (Gama & Machado, 2014).

Therefore, this article aims to test the hypothesis that Brazilian migrants make up a positively selected population group. If the hypothesis is confirmed, using the sample selection bias correction model proposed by Heckman (1979), an attempt is made to decompose the income differentials by the observable characteristics and the unobservable attributes of migrants and non-migrants based on the construction of counterfactuals.

Suppose the hypothesis of positive migratory selection of Brazilian migrants is confirmed. In that case, the national migratory movement can accentuate regional inequalities since the positively selected (more productive) form of work seeks opportunities in regions of greater economic dynamism, which can deepen existing regional economic disparities. In this sense, the results of this study can serve as a basis for the adoption of measures to mitigate migration, as a way of promoting regional economic growth, based on the use of productive human capital in originating regions, through the development of regional economic activities that can provide opportunities for growth and development through the use of domestic production factors.

Following these initial considerations, the second section of this article seeks to present some findings in the economic literature on income differentials due to individuals' most diverse observable and unobservable characteristics. In the third section, the methodological procedures used are presented. The empirical results are presented in the next section, and finally, in the fifth section, the final considerations are made.

2. Income Differentials in the Labor Market and Migratory Selection: a Literature Review

The theoretical discussion about income differentials in the labor market is treated in the international and national literature under different observation forms. A consensus, however, is on the fact that socioeconomic and demographic characteristics influence income differentials to a greater or lesser extent, depending on the country or region analyzed. The impacts are as diverse as possible and affect different ethnic-racial, age groups and differences in the human capital of the workforce (Neuman & Silber, 1996; Oaxaca & Ramson, 1998; Heckman, 1976; 1979; Funkhouser, 1996; Marcoullier et al., 1997; Márquez & Pages, 1998; Freije, 2001; Ribeiro, 2001; Corbacho, 2000; Corseuil et al., 2002a; Corseuil et al., 2002b; Neuman & Oaxaca, 2005; Orellano & Pazello, 2006; Camargo, 2006).

The classic determinants of wage differentials are also found in the migration condition of the labor force available in the market, one more attribute that can have favorable or unfavorable effects on this population group. The leading international (Borjas, 1987; Axelsson & Westerlund, 1998) and national (Santos Junior, 2002; Ramalho, 2005; Freguglia, 2007) empirical evidence, among many others, show that migrants make up a positively selected group of the population in the original regions and that unobservable attributes affect them in such a way that they also have unobservable productive characteristics that condition them, in addition to a greater probability of migrating, when they migrate, they give them better returns in the labor market, compared to non-migrants.

From this perspective, the originating regions present a loss of workforce with superior productive characteristics, and the receiving regions gain a contingent of the workforce with productive characteristics not observable through migration (Borjas, 1997; Chiswick, 1999; Taylor, 1999; Green et al., 2001; Ribeiro & Bastos, 2003; Ramalho, 2005; De Lima, Silva Filho & Cavalcanti, 2019). This movement of people provides substantially high performance in the labor market of the receiving regions. It corroborates low-performance rates in the labor market in the originating regions since the workforce with more productive characteristics migrates to other regions (Borjas, 1987; Santos Junior, 2002; Dustmann & Glitz, 2011).

In the labor market, empirical evidence shows that, in the places of destination, there is pressure on unemployment rates and nominal wages (Card, 2001a; 2001b) since the supply of labor increases and those with higher incomes stand out with superior productive characteristics. Thus, the unobservable characteristics that favor migration can also affect work and, thus, provide a higher rate of employability and, consequently, better income from work in the destination places.

In the national literature, controversies about the practical results of migratory dynamics are as diverse as possible. On the one hand, some defend, based on empirical

evidence, that migration causes income convergence since transfers arising from transfers issued by migrants to their families in the destination region have a meaningful impact on regional income in the areas broadcasters (Lewis, 1969; Ferreira & Diniz, 1995; Graham, 1977; Green et al., 2001; Cambota & Pontes, 2012; Fiess & Verner, 2003; Menezes & Ferreira Junior, 2003; Freguglia & Menezes-Filho, 2012). On the other hand, some argue that the migratory dynamic ends up accentuating regional disparities since the most productive workforce migrates seeking job opportunities in more prosperous regions, and this impacts by increasing income in the destination regions and not in the regions of origin (Ramalho, 2005; Dustmann & Glitz, 2011).

Income convergence based on migration processes in Brazil has also been addressed in the literature (Ferreira & Diniz, 1995; Ramalho, 2005; Cambota & Pontes, 2012). The results show that there is no convergence of earnings, for the most part. It is observed that the non-observable characteristics of migrants give them positively differentiated wage returns in their favor. In this way, what is done is to confirm that migrants are positively selected in terms of their characteristics and that the returns come from these productive characteristics in the labor market, which corroborates an increase in average income in the destination places and not at the origin (Cançado, 1999).

In Brazil, the vast majority of empirical studies show that migrants make up a positively selected group of the country's population, and internationally, most of the works consulted ratify selectivity and confirm that the income of migrants is higher than that of non-migrants (Ramalho, 2005; Netto JúnioR et al., 2008; Freguglia & Procópio, 2013; Graham, 1977; Wood, 1982; Borjas, 1998; Taylor, 1999; Chiswick, 1999; Cutillo & Ceccarelli, 2012). They have unobservable productive characteristics that condition them substantial differentials from the decision to migrate to the wage returns earned by them (Ramalho, 2005; Lima et al., 2011; Maciel & Hermeto, 2011; Gama & Machado, 2014; Lima et al., 2011; Gama & Hermeto, 2017). Therefore, the receiving regions obtain productivity gains with the additional workforce with high productivity rates. The evasive regions remain in processes of continuous loss of the productive workforce resulting from migratory processes.

Borjas (1987), Ramalho (2005), and Dustmann & Glitz (2011) understand that the population of migrants residing in a given region is positively selected. That is, they have unobservable characteristics that are positively favorable to their better performance when compared to a native in the same region. In this way, the impacts of migration are negative for the regions of origin since they lose a workforce with positive characteristics and better performance, and they are positive for the destination regions, given that they achieve better performance in their functions when compared to non-migrants.

Santos Junior et al. (2002), using data for the year 1999, show that Brazilian migrants are a positively selected group when considering the same in the destination

region[1]. The authors control for socioeconomic and demographic characteristics of individuals and conclude that migrants have higher average wages than non-migrants in Brazil. That is, unobservable characteristics of individual natures give them more significant returns on earnings from work than those earned by non-migrants, even when controlled for all possible observable characteristics.

Ramalho (2005), using data from the 2000 demographic census, shows positive migration selection when considering migrants residing in Brazilian metropolitan areas. The author considers as attributes of favorable selectivity the higher differentials in earnings from work for migrants compared to non-migrants. In addition, the author partially attributes income inequality in interregional spheres to the entry of qualified migrants in metropolitan areas and those with greater economic dynamism. Thus, the results converge with the model presented by Dustmann & Glitz (2011), which proposes loss of labor with more dynamic characteristics for the regions of origin and gain for the regions of destination, which, in a way, corroborates the inequality of the regional income.

Santos & Ferreira (2007) reach conclusions that differ slightly from those previously observed. The authors use PNAD data and show that migration corroborates the rise in average income in Brazilian states, with the exception of those with the most incredible economic dynamism – São Paulo and Rio de Janeiro. Thus, migration promotes the reduction of regional income inequality and positively affects regional income convergence in the long term. The results, however, differ from those achieved by Cançado (1999) when analyzing data for Brazil between 1960 and 1991. This author came to the conclusion that Brazilian migrations had null effects on the hypothesis of income convergence in the studied period. Furthermore, the positive migration balance contributed to an increase in per capita income, which suggests positive migration selection. That is, migrants are more skilled and earn higher incomes than non-migrants in the receiving regions, which increases the average regional income at the destination and not at the origin.

Furthermore, Freguglia's (2007) work shows that migrants are positively selected. For the author, unobservable characteristics of the Brazilian migrant population provide income differentials in their favor with non-migrants. These characteristics corroborate the hypothesis of favorable migratory selectivity. However, it is essential to observe that the Brazilian migratory dynamics of recent years present substantial transformations in the reasons for people leaving and entering the country's municipalities. Income control may not capture other socioeconomic issues of migrants in destination places.

However, Maciel & Oliveira (2011), using data from PNAD (2008), show that there is no favorable migratory selectivity among internal Brazilian migrants since the unobservable characteristics of migrants were not able to interfere in the differentials of labor earnings. For the authors, the high wage returns for migrants come from the returns

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[1] The studies that deal with migratory selectivity approach it, for the most part, from the perspective of income. That is, the theoretical model suggests that non-observable characteristics of immigrants place them in better conditions than natives concerning income from work. That is, they have higher wages than non-migrants.

on migration investments. That is, the returns to migration are positive and increase as the conditional distribution of wages in the country grows. Thus, only some unobservable characteristics provide yield differentials, but the returns on migration investment.

Silva et al. (2016) tested the hypothesis of favorable migratory selectivity for the North region of Brazil based on data from the 2010 demographic census. The authors show that it is impossible to validate the hypothesis of migratory selectivity for the region since, only for short-term migrants, that is, those who migrated less than five years ago, it was possible to observe income differentials with a non-migrant. In addition, the authors show that each year that migrants stay in the North of the country implies a reduction that converges around 0.05% concerning that of non-migrants. Thus, classifying migrants from the North by the length of stay, only the most recent earn relatively higher income from work than non-migrants. Overall, there are no income differentials between migrants and non-migrants.

Thus, it is essential to pay attention to the fact that the high economic disparities in Brazil are one of the leading causes of migratory dynamics. The main reason for internal migration is caused by the movement of the workforce across the national territory (Silva Filho et al., 2017). This substantial concentration of large-scale production also strongly pressures unemployment rates (Card, 2001b) in the most dynamic regions, especially in periods of economic crisis or low performance. In this way, the more incredible performance of production at regional levels can have a solid contribution to the pressure on unemployment rates, as well as on nominal wages in the labor market, and this has repercussions on the hypothesis of migratory selection.

Since Brazilian regional disparities are one of the main causes of the migratory dynamics and the pressure on unemployment rates and wages in the country's labor market, reducing these disparities could have substantially positive effects on employment and labor income. In countries with high socioeconomic disparities, migration is largely determined by the search for better working conditions. In a situation of free mobility of the labor force, the adjustment of unemployment rates happens due to migration (Lewis, 1969). Poverty, given by disparities, substantially affects the economic performance of the workforce at origin and puts pressure on unemployment rates in destination places, especially in situations where the economy undergoes cyclical movements (CARD, 2001b). Thus, the process of positive migration selection can be due to issues inherent in the search for better working conditions for the country's population.

3. Methodological Procedures

In this article, we try to test the hypothesis of positive migratory selection through Heckman's (1979) sample selection bias-corrected model. If the hypothesis that migrants are a positively selected group of the population is proven, the second step is to resort to the decomposition of Oaxaca (1973) and Blinder (1973), with corrections proposed by Neuma & Oaxaca (2006) and Cutillo & Ceccarelli (2012), from the earnings equation (Heckman's

second stage). With the estimates of the income equation method, the objective is to observe, from the decomposition, which attributes corroborate proportionally more significant income differentials between migrants and non-migrants.

3.1 Database, Variable Averages, and Time Frame.

      The data are from the Brazilian demographic censuses of the years 2000 and 2010 and work with inter-municipal migration on a geographic and fixed-date scale. The sample is composed of 6,889,619 and 6,889,607, in 2000 and 2010, respectively. The sample size was previously defined, based on the databases. All those who failed to answer any of the questions used in this article were excluded; and, from that, it was decided to use equal samples in both years, with a loss of 12 observations in the year 2010.

**Table (1: Description of the Variables Used and Standardized
in the 2000 and 2010 Censuses**

Migra	Binary (1) for people who said they lived in another municipality in 1995 and 2005, in the 2000 and 2010 censuses, respectively; (0) otherwise.
Sexo	Binary (1) for male; (0) for female
Racacor	Binary (1) for White; (0) for blacks, browns, and yellows (indigenous people were excluded from the sample).
Idade	Age of the reference person in the research. Age squared was also used in the estimates, as indicated in the literature.
Seminstfundinc	For people who declared to have no education or to have at least incomplete primary education.
Fundcompmedinc	For people who declared having completed primary education and incomplete secondary education.
Medcompsupinc	For people who declared having completed high school and incomplete higher education.
Supcomp	For people who declared having completed higher education.
Estadocivil	Binary (1) for people who declared to be married; and (0) for singles
Chefedom	Binary For people who declared to be responsible for the household.
Filho	Binary For people who said they occupy the position of son in the household.
NO	Binary for people who said they live in a municipality in the North region of the country.
NE	Binary for people who said they live in a municipality in the Northeast region of the country.
SE	Binary for people who said they live in a municipality in the Southeast region of the country.
SU	Binary for people who said they live in a municipality in the southern region of the country.
CO	Binary for people who said they live in a municipality in the Midwest region of the country.
Rendatrab	Total declared income from main job or other jobs.

Source: Author's elaboration based on data from the 2000/2010 demographic censuses

Table 1 above shows how the variables used in this article were constructed. The 2000 and 2010 censuses were standardized to make the variables compatible and comparable throughout the study.

Table 2 presents the variables used and their average values. The results show that, on average, migrants are younger than non-migrants, and migrants have higher percentages than non-migrants concerning higher levels of education.

Table (2): Descriptive Statistics of the Variables Used in this Study for Brazil: 2000/2010 Censuses

Variáveis	2000		2010	
	Não Migrante	Migrante	Não Migrante	Migrante
Sexo (Masculino)	63.1	65.7	59.4	63.1
Racacor (Branco)	54.8	55.0	48.6	47.9
Idade	34.5	31.7	35.9	32.6
Instrução				
Seminstfundinc	54.6	54.8	40.6	37.6
Fundcompmedinc	16.8	17.2	18.2	19.1
Medcompsupinc	25.8	24.6	30.3	30.4
Supcomp	2.8	3.3	10.4	12.7
Domicílio				
Estadocivil (Casado)	46.3	42.0	42.4	36.6
Chefedom	49.2	52.3	44.8	47.6
Filho	25.7	14.0	23.1	10.5
Região				
NO	6.5	8.6	7.6	9.5
NE	27.1	22.0	26.6	20.9
SE	38.7	34.5	39.8	37.5
SU	19.7	21.4	17.3	18.1
CO	8.2	13.6	8.7	14.0
Trabalho				
Rendatrab	1,131.02	1,198.24	1,072.60	1,284.46

Source: Author's elaboration based on data from the 2000/2010 demographic censuses

Furthermore, married migrants are relatively less in percentage terms than non-migrants, which may result from the effort in search of better opportunities, even before the formation of family nuclei. In addition, they are relatively majority-heading households since the migration of young people and alone are the majority in the country. There are relatively fewer lookouts that occupy the position of children in Brazilian households. In addition, it should therefore be noted that earnings per hour of work are higher for migrants than for Brazilian migrants.

3.2 Empirical Model Used

Migration studies present several theoretical hypotheses for migration decisions and their socioeconomic impacts on post-migration living conditions. However, one of the most common errors in studies on migration and income differentials between migrants and non-migrants is the fact that it is stated, in principle, that investment in migration is a determining factor in the acquisition of higher wages in their favor, which may carry sample selection bias in these analyses, as there may be a non-linear relationship not captured by simple methods.

Due to the neoclassical theoretical approach and the dissemination of studies on Brazilian migrations, the presence of non-observable productive characteristics intrinsic to migrants, such as aggressiveness, ambition, determination, enthusiasm at work, and motivations, cannot be captured, or at least verified, without a more robust empirical exercise that can correct the selection bias about migrants. Thus, when it is stated that the probability of migrating and the possible effects on income differentials are due to the more significant investment in human capital inherent to migrants, one may be omitting the migratory selectivity bias found in classic international studies and more recent studies nationwide (Borjas, 1997; Chiswick, 1999; Santos Junior, 2002; Fiess & Verner, 2003; Ribeiro & Bastos, 2005; Maciel & Hermeto, 2011; De Lima et al., 2019; Gama & Hermeto, 2017).

Because of this, it is essential to test the hypothesis of positive migration selection and, with that, to analyze the income differentials between migrants and non-migrants without neglecting the existence of unobservable characteristics, that is, the selection biases that affect the decision to migrate (Heckman, 1979). Thus, the procedure instituted by Heckman in two stages with the correction of sample selection bias is used. The objective is to observe the characteristics that directly impact the migration decision. That is, if migrants are, in fact, a positively selected group of the Brazilian population.

Therefore, Heckman's study (1979) is based on the study, which proposes a model with sample selection bias correction to capture the effects of unobservable characteristics that affect individuals' decisions. With this, the estimation of the earnings from work equation is based on the classic Mincerian equation for determining wages, using observable variables that affect earnings (Mincer, 1971), in which:

$$\ln W_i = \beta X_i + \delta I_i + \mu_i \tag{1}$$

$\ln W_i$ is determined as the logarithm of the salary of the employed workforce with $W_i > 0$, X_i if it refers to the set of observable socioeconomic and demographic characteristics that affect the earnings of the employed workforce; I_i is defined as a variable Bináriathat assumes 1when the individual responds to being born in another municipality and living in the current municipality for less than five years at the time of the survey, that is, being a fixed date migrant, and , otherwise 0; μ_i is defined as the stochastic error term of the model.

In this study, it is assumed that migrants are not a random sample of the population residing in a Brazilian municipality, that is, migrants have unobservable characteristics that have a positive impact on the decision to migrate. Thus, adding the wage determination equation, another sample selection bias correction equation instituted by Heckman (1979) is necessary. Whatever:

$$I^* = Z_i \gamma + \varepsilon_i \tag{2}$$

In this equation, Z_i is defined as a set of unobservable characteristics that impact an individual's decision to migrate i. These characteristics confer a differentiated status on the migrant and classify him as a member of a positively selected group. Thus, these characteristics affect the decision to migrate and, consequently, to be in another Brazilian municipality, different from where it was five years before the census survey. Furthermore, if the individual migrates $(I = 1)$, then $(I^* > 0)$. In these terms, the probability of migration will be associated with net earnings from work higher than 0in the place of destination of the migrants.

When considering that migrants are a positively selected group and not a random sample of the population of a country, the first stage of the procedure proposed by Heckman (1979) is used, with the correction of sample selection bias, which can be estimated through a model Probit, where the characteristics that influence the migration decision can be estimated from the mathematical instruments presented in the equation (3). By this equation, the probability of an individual ibeing migrant can be expressed as follows, based on Cameron & Trivedi (2005, chapter 16, pages 539 to 543), Greene (2012) and presented in Maciel & Hermeto (2011):

$$\begin{aligned} \Pr_i(I = 1) = \Pr_i(I^* > 0) &= \Pr_i(Z_i \gamma + \mu_i > 0) \\ &= \Pr_i(\varepsilon_i > -Z_i \gamma) \end{aligned} \tag{3}$$

Here, the instrument proposed by Heckman (1979) is used, in which the vector of variables Xcontains the observable socioeconomic and demographic characteristics that affect the migration decision, and certainly maintains characteristics in common with those contained in the vector Zthat contains the variables that are determinants in the earnings equation, that is, the wages of the workforce employed with $W_i > 0$. However, at least one of the variables contained in X(vectors with variables determining the probability of migrating) must not be in Z(vectors of variables that influence earnings from work).

Thus, of the variables contained in the first equation, the migration decision, only the variables Estadocivil, Chefedomand Filhoare not contained in X, that is, the wage equation, as they are not considered in the literature as relevant variables in determining earnings from work. In the first stage, the probability of migrating is estimated where the variable Migrais the dependent one; in the second stage, the income equation is estimated, where o ln _rendatrabis the variable to be explained, conditioned to migrants (I=1).

From this, the wage equation can be rewritten as follows[2], when one has lnW$_i$observed, if and only if, $(\varepsilon_i > -Z_i\gamma)$such that the stochastic errors of the wage migration equations (μ_i e ε_i)are normally distributed with zero mean and correlation ρ. In this way, the equation of wages from work can be restated as follows:

$$S[\ln W_i | I^* > 0] = S\langle \ln W_i | \varepsilon_i > -Z_i\gamma \rangle = \beta X_i + \delta I_i + S\langle \mu_i | \varepsilon_i > -Z_i\gamma \rangle$$
$$= \beta X_i + \delta I_i + \rho\sigma_u\lambda_{i(\alpha_\varepsilon)}$$
$$= \beta X_i + \delta I_i + \gamma_\lambda\lambda_i(\alpha_\varepsilon) \qquad (4)$$

Understanding that:

$$\alpha_\varepsilon = \left(\frac{-Z_i\gamma}{\sigma_\varepsilon}\right) e \; \lambda(\alpha_\varepsilon) = \left[\frac{\phi(Z\gamma_i/\sigma_\varepsilon)}{\Phi\big((Z\gamma_i/\sigma_\varepsilon)\big)}\right]; S[\ln W_i | \varepsilon_i > -Z_i\gamma] + v_i$$
$$= \beta X_i + \delta I_i + \gamma_\lambda\lambda_i(\alpha_\varepsilon)$$
$$+ v_i \qquad (5)$$

Thus, if the expectation of the errors of the equation 1is not equal to zero, the estimates by Ordinary Least Squares (MQO)will be biased, since $\rho \neq 0$. Therefore, the omission of the Inversa da Razão de Millsone represented by λwould not allow estimating the equation without capturing the sample selection bias (correction instituted by Heckman, 1979). Thus, the second stage of Heckman's model (1979) with correction for sample selection bias suggests that the equation of earnings that are influenced by Ncharacteristics between different groups be estimated as follows:

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[2] See Cameron & Trivedi (2005, chapter 16, pages 539 to 543).

$$\ln W_i = \beta X_i + \gamma \lambda_i + v_i \qquad (6)$$

where $\ln W_i$ is the natural logarithm of wages derived from migrant work; X_i is a vector of control variables that is composed of socioeconomic and demographic variables; and, λ_i is the Inverso da Razão de Mills (IRM), with correction for sample selection bias; v_i is a stochastic error vector of the fitted regression. This equation is adjusted only for the migrant group (I=1). Analogous adjustment was performed for the non-migrant group. That is, in the first stage, the probability of being a non-migrant was adjusted and, in the second stage, the income determinants controlled by IRMthe non-migrant selection function.

Therefore, the first and second stage estimations were corrected, and the results of the coefficients will not be biased. Controlling for selection bias allows for robust parameter estimates for this type of study.

Then, after verifying that migrants make up a positively selected group of the Brazilian population, the decomposition method was used, based on the construction of a counterfactual for equations for non-migrants, with the dependent variable being ln _rendatrab. The covariates are the same ones used in the migrant earnings equation. From the calculation of counterfactual earnings, it must be decomposed by characteristics, the impacts of each of the observable variables and the non-observable productive attributes on labor earnings. The decomposition takes the following form (Neuman & Oaxaca, 2005):

$$\overline{Y}_m - \overline{Y}_{nm} = \overline{X}'_{nm}\left(\hat{\beta}_m - \hat{\beta}_{nm}\right) + \hat{\beta}_m(\overline{X}_m - \overline{X}_{nm})' \\ + \left(\hat{\theta}_m\hat{\lambda}_m - \hat{\theta}_{nm}\hat{\lambda}_{nm}\right) \qquad (7)$$

The subscripts mand nmare assigned to migrant individuals and non-migrant individuals, respectively; the matrices $\overline{X}$are composed of the average characteristics of migrants and non-migrants; the vector βreturns the characteristics contained in the matrix $\overline{X}$; o $\overline{Y}_{im}$represents the average return on the migrant's earnings from work; $\overline{Y}_{inm}$the average return to labor income of non-migrants used as a counterfactual.

Rewriting the equation above, the decomposition is maintained from observable and non-observable characteristics, eliminating with the selectivity bias subtracted from the income values.

$$\left(\overline{Y}_{im} - \overline{Y}_{inm}\right) - \left(\hat{\theta}_{im}\hat{\lambda}_{im} - \hat{\theta}_{inm}\hat{\lambda}_{inm}\right) \\ = \overline{X}'_{inm}\left(\hat{\beta}_{im} - \hat{\beta}_{inm}\right) + \hat{\beta}_{im}(\overline{X}_{im} - \overline{X}_{inm})' \qquad (8)$$

From the equation, 8the results are presented with the decomposition of the observable characteristics of each vector $\beta$and the average characteristics instituted in the matrix $\overline{X}$that aggregates the average values of the variables. Thus, on the left side, there is the sum of total inequalities minus the selection bias; on the left side, there is the sum of the

inequality component attributed to the differences captured by β`ₛand the characteristic effect arising from the differences between Brazilian intercity migrants and non-migrants.

4. Results and Discussions

Due to the observable characteristics of the Brazilian population, it was possible to present, in Table 1, those that may influence the probability of intercity migration in the country. The estimates presented in Table 3 shows that the classic variables widely discussed in several empirical studies stand out in the probability of an individual being a migrant. Men are more likely to be migrants compared to women in both years. It is pertinent to point out that the value of the coefficient of the variable for the year 2010 increases compared to the year 2000, showing that, in addition to the probability being more excellent, it is still increasing. Concerning race/color, despite being statistically significant, the coefficients are markedly low, showing that there is no substantial influence of race/color on the probability of migration in the country, these results being convergent with those found by Maciel and Hermeto (2011); Silva et al., (2016); Gama and Hermeto (2017).

In the year 2000, being of a white race/color increased the probability of being a migrant compared to being a non-white. In 2010, the sign of the variable's coefficient changed, and the probability of a white individual being a migrant was reduced with a non-white individual. The sign change may only reflect the increase in the number of self-declarations of race/color in census surveys, given by the greater awareness of the population with ethnicity. Furthermore, the low values assumed by the coefficients show that race/color does not present substantial differences in inter-municipal migration between banks and non-whites in the inter-census period.

The coefficients and signs assumed by the variable indicate a reduced probability of migrating. That is, one more year reduced by four percentage points in 2000 and by three percentage points in 2010 the probability of an individual being an intercity migrant in Brazil. In addition, concerning the probability of being a migrant, according to the level of education, it is possible to see that using the uneducated and with incomplete primary education as a reference category, the probability of being a migrant is reduced for those with complete primary education and incomplete average in both years, but it rises for those with complete secondary education and incomplete higher education, albeit slightly. Those who have completed higher education are more likely. For these, the probability is 18 percentage points in the first year and 22 percentage points in the last year, compared to those with less schooling. That is, the probability of intercity migration in Brazil is recorded at the extremes of schooling. It is damaging for those who have completed elementary school and incomplete high school; and favorable for those with at least secondary education, converging with the findings of Gama and Machado (2014) for the state of Minas Gerais and Silva Filho and Resende (2021) for the Northeast region.

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Table (3): Estimates of the Probability of Migration to Brazil
in the 2000 and 2010 Censuses

Variável dependente = Migra	2000	2010
Constante	-0.198***	-0.416***
	(0.007)	(0.008)
Sexo (Masculino)	0.129***	0.142***
	(0.002)	(0.002)
Racacor (Branco)	0.017***	-0.003**
	(0.001)	(0.002)
Idade	-0.037***	-0.033***
	(0.0000)	(0.0004)
Idade^2	0.0002***	0.0001***
	(0.00000)	(0.00001)
Fundcompmedinc	-0.018***	-0.002
	(0.002)	(0.002)
Medcompsupinc	0.010***	0.016***
	(0.002)	(0.002)
Supcomp	0.178***	0.217***
	(0.004)	(0.002)
Estadocivil (casado)	-0.152***	-0.162***
	(0.002)	(0.002)
Chefedom	-0.093***	-0.067***
	(0.002)	(0.002)
Filho	-0.793***	-0.826***
	(0.002)	(0.002)
NO	0.222***	0.196***
	(0.003)	(0.003)
SE	0.071***	0.124***
	(0.002)	(0.002)
SU	0.159***	0.166***
	(0.002)	(0.002)
CO	0.365***	0.360***
	(0.002)	(0.003)
R^2	0.417	0.3853
Observations	6,889,619	6,889,607

Nota: $*** p < 0,01; ** p < 0,05; * p < 0,1$

Source: Author's elaboration based on data from the 2000/2010 demographic censuses

It is essential to highlight that marital status, head of household, and child status reduce the probability of an individual being an intercity migrant in Brazil. The effect of marital status on the reduction in the probability of being a migrant is 15 percentage points in the first year and 16 percentage points in the last year under analysis. Having a child in the household reduces the probability of being a migrant by 79 percentage points and 82 percentage points in 2000 and 2010, respectively, compared to the category omitted from

the model. Empirical studies also present similar results in the international and national literature (Mincer, 1978).

Furthermore, it is essential to highlight that residing in any Brazilian region increases the probability of being a migrant, having as a reference a resident in the Northeast region (the Northeast region is omitted in the model). That is, residing in the North of the country increases the probability of being a migrant by 22 percentage points, against 20 percentage points when residing in the Northeast, in 2000 and 2010, respectively. Furthermore, residing in the Southeast increases the probability of being a migrant by seven percentage points and 12 percentage points in the first and last year, respectively, compared to a resident in the Northeast. Living in the Midwest had the highest coefficient compared to a resident in the Northeast. That is, residing in the Midwest region increased the probability of being a migrant by 37 percentage points in the first and 36 percentage points in the second year under analysis.

Based on the results, although the Northeast has entered the process of reversing its migration rates, reducing its share among the migrants' places of origin and maintaining high return migration rates (Oliveira & Jannuzzi, 2005; Justo et al., 2012), the probability of an individual being a migrant living in any other region of the country is even more outstanding compared to an individual residing in the Northeast, which defines other regions as potential recipients of migrants.

In the earnings equation (Table 4), the data reveal substantial differentials in earnings arising from the individual characteristics of the population. The person variable has a high coefficient, showing that the income differentials between men and women are discrepant, in addition to having increased its value in the year 2010 compared to the year 2000. In the first year, a male-employed migrant received 45 percentage points more income from work than a female individual in the same condition. In the second year, the gap rises to 47 percentage points, converging with a large number of empirical studies carried out at the international and national levels (Brown et al., 1980; Macpherson & Hirsch, 1995; Neuman & Weisberg, 1998; Gama & Hermeto, 2017).

Concerning race/color, the coefficient assumed by the variable shows that the gap is reduced since, in 2000, a white individual had an income 18 percentage points higher than a non-white individual. In 2010, race/color still affected the income log by 13 percentage points in favor of those who declared themselves white, compared to non-whites, with the results converging with the international and national literature (Reimers, 1983; Soares, 2000; Crespo & Reis, 2004; Kim, 2010; Gama & Hermeto, 2017; Silva Filho & Resende, 2021). It is essential to point out that although the probability of migration is slightly affected by race/color, this variable is of crucial importance in determining the salary of migrants in the country, according to the results of the coefficients presented.

With regard, this variable showed coefficients indicating that one more year increased income by ten percentage points in 2000 and 7 percentage points in 2010. A had a negative sign, indicating an inverted U relationship between income and age. The results

converge with those in the literature, showing that age is essential in determining earnings, which may be associated with an increase in workforce experience over the years. Nevertheless, income starts to decline after a certain age.

Table (4): Heckman's Second Stage Estimate of the Determination of Labor Income of Migrants in Brazil – 2000/2010

Variável dependente = ln_rendatrab	2000	2010
Constante	3,968***	4,553***
	(0.011)	(0.013)
Sexo (Masculino)	0.460***	0.466***
	(0.002)	(0.002)
Racacor (Branco)	0.184***	0.126***
	(0.002)	(0.002)
Idade	0.096***	0.071***
	(0.000)	(0.001)
Idade²	-0.001***	-0.001***
	(0.000)	(0.000)
Fundcompmedinc	0.415***	0.271***
	(0.003)	(0.003)
Medcompsupinc	0.994***	0.608***
	(0.002)	(0.002)
Supcomp	1,911***	1,449***
	(0.005)	(0.003)
NO	0.252***	0.225***
	(0.004)	(0.004)
SE	0.395***	0.323***
	(0.003)	(0.003)
SU	0.280***	0.295***
	(0.003)	(0.003)
CO	0.318***	0.346***
	(0.003)	(0.004)
Inverse Mills Ratio	-0.296***	-0.199***
	(0.006)	(0.005)
rho	-0.365	-0.266
sigma	0.8109	0.7491
R²	0.4053	0.3853
Observations	6,889,619	6,889,607

Nota: ∗∗∗ p < 0,01; ∗∗ p < 0,05; ∗ p < 0,1

Source: Author's elaboration based on data from the 2000/2010 demographic censuses

The coefficients for schooling, regarding individuals without education and with incomplete primary education, show that schooling is essential for wage returns in the labor market (ROCHA et al., 2010; SILVA FILHO *&* RESENDE, 2021). Having completed high school and having incomplete higher education increases *log* income by 174% in the first and 84% in the second year under analysis[3]. concerning those employed with complete higher education, income from work was approximately six times higher in 2000 and 3 times higher in 2010 compared to an individual without education and with incomplete primary education. In the first year, the income from work of an individual with a university degree was approximately 600% higher than that of an individual with no education and incomplete primary education (reference category). In 2010, the gap was reduced to approximately 300%.

The returns on investment in human capital, despite still being high compared to those with a lower level of education, are substantially reduced over the years. There is a compression in earnings from work, reducing the gap between more educated and less educated migrants employed in the country. This reduction was recorded at approximately 50% for migrants employed with higher education courses in the inter-census period.

Also, in Table 4, it is worth mentioning the fact that he is working in more dynamic geographic regions for wage returns in the labor market. Taking the employed in the Northeast as a reference category (omitted variable), migrants in the North received, on average, 25 percentage points in 2000 and 22.5 percentage points in 2010 more than an employed migrant in the Northeast. Migrants employed in the Southeast have the highest earnings from work compared to those employed in the Northeast, and in 2000, the gap reached 40 percentage points. In the second, despite the reduction, it still recorded 32 percentage points, the region with the most significant income differentials in the country, and comparatively to the income from work earned by those employed in the Northeast Brazilian.

The values remained practically constant in the South region, approximately 28 percentage points in the first year and 30 percentage points in the second year. The Center-West increased the gap in 2010 compared to the year 2000. In this region, an employed migrant earned 32 percentage points in the first year and 36 percentage points in the second year, more than an employed migrant in the Northeast. It was one of the only regions in the country that showed an increase in the already existing gap in labor income for employed migrants, in addition to being one of the regions that have attracted the most migrants in recent years (Guimarães & Leme, 2002; Brito, 2006; Juttel, 2007).

Table 5 shows the data referring to the decomposition of earnings differentials between migrants and non-migrants employed in the Brazilian labor market in the years 2000 and 2010. For analytical simplicity, Neuman & Oaxaca (2005) suggest isolating the

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[3]The calculation is made from the coefficients presented by the variables, according to the Table, using the following expression: Exp(Coefficient)-1, as indicated in the literature.

effect of selectivity in income differential, interpreting only the remaining portion due to observable and unobservable factors. Thus, the contribution percentage was calculated only for the differential portion after excluding the selectivity component contribution.

The results show that the unobservable effects are primarily responsible for the income differentials between migrants and non-migrants. These contribute to a higher income for migrants than non-migrants, corroborating the hypothesis of favorable selectivity. In the year 2000, the effects of unobservable characteristics (coefficients) of migrants contributed to an increase by approximately 0.63 the average income log of migrants with non-migrants, that is, in percentage terms, 88% more. In 2010, although with a reduction, the non-observable characteristics increased by 0.57 the average income log in favor of migrants. That is, 77% of wage differentials. The observable characteristics corroborated higher incomes in favor of non-migrants to the detriment of migrants in the same year. In both years, these observable characteristics corroborated differentials of 2% in earnings from work in favor of non-migrants, higher than those recorded for migrants. Considering the total effects, migrants had, on average, 1% of characteristics that corroborated better earnings from work compared to a non-migrant in the year 2000 and 11% in the year 2010.

Table (5): Decomposition of the Marginal Effects of Observable and Non-Observable Characteristics on the Income Differentials of Non-Migrants and Migrants - 2000/2010

Efeitos	2000		2010		Variação $(10 - 00)$
	Absoluto	Relativo	Absoluto	Relativo	
Sexo	0.013		0.034		0.021
Racacor	-0.006		-0.009		-0.003
Idade	-0.096		0.041		0.137
Idade^2	-0.043		-0.095		-0.051
Fundcompmedinc	-0.028		-0.012		0.016
Medcompsupinc	-0.004		-0.011		-0.007
Supcomp	-0.001		0.009		0.010
NO	-0.002		-0.002		0,000
SE	-0.042		-0.041		0,000
SU	-0.022		-0.021		0.001
CO	-0.009		-0.009		-0.001
Efeito Coeficientes	0.627	104	0.5687	96	-0.058
Efeito Características	-0.023	-4	0.0244	4	0.047
Seletividade	-0.596		-0.480		0.116
Diferença total	0.008	100	0.113	100	0.105

Source: author's elaboration based on estimates based on data from the 2000/2010 demographic censuses.

Based on the results, migrants show unobservable characteristics such as ambition, persistence, determination, enthusiasm, and daring, in addition to non-measurable productive attributes in the labor market that give them higher incomes than non-migrants in both years under analysis. As a result, in addition to being positively selected in the region of origin, given that they have characteristics that make them more prone to migration when they migrate, they still earn better income in the labor market than non-migrants.

5. Final Considerations

This article aimed to analyze whether Brazilian intercity migrants are a positively selected population group. A two-stage Heckman procedure was used with sample selection bias correction for data from the 2000 and 2010 censuses.

The results showed that Brazilian intercity migrants are a positively selected group of the country's population. The inverse of the Mills ratio shows statistical significance at 0.001, confirming the hypothesis of positive migratory selection for Brazilian fixed-date migrants in the two censuses under analysis.

Heckman's first stage shows that the probability of migration is more remarkable for white men in 2000 and non-white men in 2010. The probability decreases with increasing age and increases with schooling, with higher associated coefficients to the probability of migration for those who have completed higher education in the two censuses under analysis. If individuals have a university degree, the probability of being an intercity migrant is approximately 18 percentage points in the first and 22 percentage points in the second year studied.

Regarding marital status, the probability decreases with marriage and with the position of head of household, as well as among those with the position of the child in Brazilian municipal households. These results converge with those of the international literature, which indicates that the decision to migrate after the marital union becomes of a family nature and that those responsible for the household or spouses with stronger family ties end up having a lower probability of becoming a migrant in Brazilian territory.

Concerning the region of residence, residing in the North, Southeast, South, and Midwest increases the probability of being a migrant compared to a resident in the Brazilian Northeast. The values assumed by the coefficients show that, even though the Northeast is a potentially receiving region for returned migrants in recent years, its characteristic of an expulsion region prevails. That is, the probability of a resident in other regions of the country being a migrant is much greater than that of a resident in the Northeast since the region was, for many decades, one of the central regions of migratory evasion throughout the country.

In the income equation, Heckman's second stage, the results converge with those of the national and international literature, showing that income is higher in favor of men of white race/color and grows with age but in a decreasing way. In addition, income increases

with schooling, showing that investment in human capital is a crucial way to earn better income from work in the country. Furthermore, the region of occupation has an important influence on the labor income of migrants. Being employed in the Southeast and Midwest of Brazil provides the highest wage returns compared to those employed in the Northeast. In addition, those employed in the North and South also earn higher incomes than those employed in the Northeast.

Thus, the results presented by the decomposition corroborate that migrants make up a positively selected group of the population and that, in addition to having a greater probability of migrating and of better income from work, when they migrate, the unobservable characteristics give them a more significant share in the income of the work, showing that they are more motivated, persistent and productive in the Brazilian labor market.

From this, it is opportune to point out that the favorable migratory selectivity in Brazil can accentuate the problems faced by regional socioeconomic inequalities. As evidence of selectivity denounces, migrants are more motivated, persistent, ambitious, and consequently more productive in the labor market than non-migrants. Therefore, the migration of the productive Brazilian workforce occurs from less dynamic regions to more economically dynamic ones. Therefore, the most productive human capital impacts the destination regions, increasing their productivity and accentuating inequalities in the region of origin.

In practical terms, the contribution of this study is to propose policies to reduce regional economic disparities, by encouraging the development of economic activities, according to their potential, in all regions of the country. With this, the reduction of the migratory flow of productive human capital to more dynamic regions must be reduced in such a way that they can contribute to the growth and economic development of their original regions since the policies to promote the reduction of regional inequalities in Brazil must list measures for the development of potential economic activities in each of its macro-regions.

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Does Supply-Leading Hypothesis Hold in Emerging Markets? Empirical Insights from a European Market

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Abstract

This study examines the relationship between financial development and economic growth, and the extent to which the finance-leading hypothesis holds in Hungary by using annual time series data over the period 1970-2019. To test the hypotheses of the study, the autoregressive distributed lag approach and Granger causality test have been applied. The empirical findings show that there is a relationship between financial and economic growth, but the evidence of the supply-leading hypothesis in the long run in Hungary is varied according to the sector. While in the short run, the changes in the ratios of credit to both agencies of the private sector have no statistically significant impact on economic growth. According to the Granger test, there is evidence supporting the neutrality hypothesis for the credit-to-corporate ratio and the feedback hypothesis for the credit-to-household ratio in relation to economic growth. This is a consequence of the fact low levels of efficiency characterized the Hungarian financial system, despite it being characterized by high levels of financial depth. Besides, financial liberalization and financial development increased reliance on external finance, which caused the fragility of the financial system and the effect on its role in economic growth. Policymakers need to target the channels and financial efficiency mechanisms to influence and transform the real economy in all the regions of the country to equally develop goals and economic growth together and ensure stable macroeconomic policies.

هل فرضية قيادة العرض صحيحة في الأسواق الناشئة؟ دلائل تجريبية من سوق أوروبية

فائزة برهوم
توث جورجي

ملخص

تبحث هذه الدراسة في العلاقة بين التطور المالي والنمو الاقتصادي، وإلى أي مدى فرضية قيادة العرض صحيحة في المجر باستخدام بيانات السلاسل الزمنية السنوية خلال الحقبة 1970-2019. لاختبار فرضيات الدراسة، تم تطبيق نهج الانحدار الذاتي للفجوات الزمنية المتباطئة واختبار سببية جرانجر. تظهر النتائج التجريبية أن هناك علاقة بين التطور المالي والنمو الاقتصادي، لكن الأدلة على فرضية العرض الرائدة على المدى الطويل في المجر تتنوع وفقًا للقطاع. في حين في المدى القصير، فإن التغيرات في نسب الائتمان للقطاع الخاص ليس لها تأثير مهم إحصائيًا على النمو الاقتصادي. وفقًا لاختبار جرانجر، هناك دليل يدعم فرضية الحياد لنسبة الائتمان إلى الشركات وفرضية التغذية الراجعة لنسبة الائتمان إلى الأسرة فيما يتعلق بالنمو الاقتصادي. وهذه نتيجة لانخفاض مستويات الكفاءة التي اتسم به النظام المالي الهنغاري، مع أنّ أنه يتسم بمستويات عالية من العمق المالي. إلى جانب ذلك، أدى التحرير المالي والتنمية المالية إلى زيادة الاعتماد على التمويل الخارجي، مما تسبب في هشاشة النظام المالي وتأثيره على دوره في النمو الاقتصادي. يحتاج صانعو السياسات إلى استهداف القنوات وآليات الكفاءة المالية للتأثير على الاقتصاد الحقيقي وتحويله في جميع مناطق البلاد لتطوير الأهداف والنمو الاقتصادي معًا بشكل متساوٍ وضمان استقرار سياسات الاقتصاد الكلي.

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1. Introduction

One of the key objectives of sustainable development is growth. It is a critical component of the long-term growth and stability of a country and is the main reason for the wealth and well-being of millions of people. While some countries' economies expand quickly, others do not (North, 1994). Decision-makers have given this topic a lot of thought over 200 years. Additionally, economists have proposed some ideas on the key variables affecting economic growth, which may help to explain why there are regional differences in economic growth. However, no single theory offers a definitive solution.

One of these drivers is an economy's financial systems' development, which was later introduced by classical economic theory as the key element of economic growth and has gained more attention during the recent thirty decades. However, schools of thought have not reached a consensus that financial development (hereafter FD) is always the cause of economic growth. Theories of finance and growth provide different predictions about the impact of the functioning of financial systems on growth and their connection. For example, FD causes growth (Bagehot, 1873; Schumpeter 1912), or FD is the outcomes of the process of growth (Robinson, 1952), or maybe it is a destabilizing element because it causes macro and financial turbulence through massive risks and its source of crises (Minsky, 1983). Other famous experts, including Nobel laureates in economics, have ignored the function of FD in development and economic growth (e.g., Lucas, 1988). Moreover, since the 2008 financial crisis, the finance-growth nexus has been called into question, despite the substantial and broad evidence of the positive impact of FD in determining a country's economic growth that is at this time written about in the research.

Literature suggests that a well-developed financial system fosters economic growth through its efficient functions in pooling savings, allocating to higher efficient productive investments, reducing transaction costs and risks, and implementing corporate governance (Levine, 2005). Thus, an inadequately developed financial sector is a barrier to economic growth. However, each one of those functions and its effect mechanisms of economic growth is not the same in all economics, but they rely on country-specific and on its institutions and vary over

time as well. Consider that a single-country study would be more useful for assessing the connection between FD and growth and for offering practical policy implications.

Theoretically, Bagehot (1873) and Schumpeter (1912) were among the first to discuss this relationship between finance and growth, and this relationship has been the subject of much literature, especially since emerging the Endogenous Growth Theory (hereafter EGT) in the early 1990s. Over the past thirty years, the literature used various indicators of FD and growth with different econometric approaches, used also aggregate macro (and micro)-level data. However, the questions of whether FD is good or bad for growth and whether FD is a cause /or outcome of economic growth are still without a conclusive answer. In other words, there is no consensus among the researchers about the shape of the relationships and the impact of FD on economic growth, thus, more empirical literature is still needed.

Since the transition process in the 1990s, Hungary has launched various financial restructuring programs. And its financial sector had also two crises that were followed by the economic recession. However, despite the importance of the finance-growth nexus from the perspectives of both scholars and policymakers, there are insufficient empirical studies on the finance-economic growth nexus. In addition, the existing literature shows contradictory and ambiguous results. For example, Varela (2018) pointed out that FD and financial liberalization in 2001 in Hungary promoted economic growth. While Tsaurai (2015) reported, the finance-growth link is not clear in Hungary.

Moreover, a serious concern has risen recently about the finance-growth debate in Hungary, particularly because the financial system in pre-crisis years was one of the most developed in the European region. However, its economic progress has slowed down, leaving the matter unresolved. Hence, the motivation of this paper is driven by the role that may FD plays in the Hungarian economy by allocating financial resources, mobilizing and pooling savings, as well as, reducing risks.

The primary two purposes of the paper are to shine a new light on this debate through an examination of the relationship between FD and economic growth by using Hungary data over the period of 1971 to 2019, and answer the following research question: Does the finance-led growth hypothesis hold in Hungary? Therefore, the study's findings may aid in steering economic and financial policy decisions in the right direction.

The main contributions of this study include: (I) contributing to filling the gap in the scarce extant literature about the specific relationship between FD and growth in Hungary, which is dominated by cross-country analysis; (II) contributing to the discussion of the impact of FD on growth and to the academic literature on the relationship between finance and growth. The Autoregressive Distributed Lag (ARDL) Approach is used for empirical analysis. The findings suggest the existence of a stable long-run relationship between growth and FD in Hungary. However, the finance-led growth hypothesis does not hold with the Hungarian economy.

Our study suggests that, contrary to what the EGT and some studies claimed, and contrarily to household sector in Hungary, the evidence of the supply-leading hypothesis is weak in Hungary in the case of corporate funding. This is a consequence of the fact that an unhealthy system characterizes the Hungarian financial system and affects the quality and volume of funds available for investment. Although it is characterized by high levels of financial depth and has a range of financial services that are accessible to all sectors and income levels, it does not have adequate high levels of efficiency. As a result, the performing Hungarian financial system is not doing plays an important role in the economy, either by facilitating the accumulation of capital through the efficient direct flow of savings or through the flow of investments in the economy. In addition, financial liberalization and FD increased reliance on external finance, which caused fragility of the financial system and harmed economic growth. Moreover, efficiency challenges and political change issues also contributed to the performance of the financial sector in Hungary. Policymakers need to target the channels and mechanisms through which financial efficiency influences and transforms the real economy, and policy reform for financial development should, therefore, continue to be a priority.

The rest of the paper is organized, as follows: A brief review of the finance-growth nexus would be included in the next section. Section 3 highlights the financial system and economic growth experiences of Hungary. We described the model and data in section 4; section 5 presents the results and analysis of the study. Finally, section 6 provides concluding statements and recommendations.

2. A Brief review on Finance- Growth Nexus

The discussion idea of the finance-growth nexus started with Bagehot (1873), who attributes the success of economic development in British to the efficient role of the financial sector. However, the most valuable contribution came from the work of Schumpeter (1911) who developed the finance-led growth hypothesis (or supply-leading responses hypothesis), in which a well-developed financial sector is a pre-condition and necessary for economic growth, however, economic growth is not a condition for FD. Later, (Goldsmith, 1969; Rinosha and Mustafa, 2021) among others, supported this view empirically.

Interestingly, building on Schumpeter's viewpoint has been later developed the models of EGT. However, someone did not widely accept and delay this viewpoint (because of several reasons such as the impactions of World War, then the Great Depression in 1929, and later the emergence of Keynesian theory in 1936) until the mid-1950s, when Gurley and Shaw (1956) provided evidence that the causality goes from FD to growth, rather than from growth to FD, as Robinson (1952) had claimed.

In the 1970s, the discussion concentrated on the phenomenon of financial repression, especially after the Bretton Woods international monetary system breakdown in 1971. Supporters of financial liberalization theory (McKinnon (1973) and Shaw (1973) suggested that achieving a high economic growth goal would be through financial liberalization policies. Which influence saving and investment in the country due to are considered the primary factors for economic growth for any economy. However, this view has been strongly disputed in the economic discussion (e.g., Minsky, 1983, Van, 1983)) among others. Especially the frequent and severe crises (e.g., the 2008 crisis), that followed the experiences of financial

liberalization and financial innovations in several countries. The liberalization allowed considerable inflows of capital, resulting in weak financial systems to absorb the external shocks, as occurred in Hungary during the years pre-crisis in 2008.

Next to the FD models such as the model of Stiglitz and Weiss (1981), the emergence of the EGT models like the model of Romer (1986), played a mainly role in promoting the contribution of finance to economic growth by improving the rates of technological progress. Indeed, the EGT came because of the failure of neoclassical models to explain why there are higher rates of economic growth in developed countries than in developing countries. And how to improve the rates of technological progress.

According to EGT, technological advance, human capital, and finance (which have a prominent role in capital accumulation and innovation) are prime determinants of growth. And contrarily to neoclassical models, the growth factors are not subject to the law of diminishing returns while being related to the type of investments like investment in technology and knowledge, so the growth is a continuing accumulation of process. Several growth models supported this view in the early 1990s (e.g., Greenwood and Jovanovic, (1990)), wherein FD is the mainly engine of economic growth through the accumulation of capital channel and productivity channel. However, not all those endogenous growth models suggest the importance of finance for growth (e.g., Lucas, (1988)), which suggests that the independent views or neutrality hypothesis between FD and economic growth, and even if any, it will be unimportant.

From the causality relationship concept, in the literature, along with the three hypotheses mentioned earlier, there is the fourth hypothesis related to the causality relationship between FD and economic growth, which is the feedback hypothesis. This hypothesis was developed by Patrick (1966), who assumes that there is a two-way causal link between two variables, and growth is a response to FD, and the latter also is a response to growth and development.

All the above views assume that the relationship between FD and growth is linear, only in the model of Greenwood and Jovanovic, the relationship between finance and growth is non-linear, in a U-shape, a slow economic growth at the early stages of FD before reaching a certain threshold when the growth speeds up. However, this point varies according to the economy of the country's characteristics and other factors.

Contrary, in recent years, there has been an increasing amount of literature studies have raised the issue of "too much finance,", implying that the relation between the two variables is an inverted U-shaped curve, rather than a U-shaped curve. For example, Swamy and Dharani(2019). have pointed out that there is an inverted U-shaped relationship between finance and growth in the long run, with a threshold of credit of 142 percent of GDP, thus more finance is harmful to economic growth in 24 advanced economies with higher levels of financial development, over the period 1983 to 2013.The explanations for the notion of "too much finance" have been summered in several alternative explanations, by Beck (2012), that not all credit is created equal; non-intermediation financial activities help catch up to the productivity frontier, the safety net subsidy; misalignment of talents, as well as, political capture (Panizza, 2014).

Over the past thirty years, these above different views have been empirically substantiated. However, the question of whether financial development affects economic growth positively or negatively is still without a conclusive answer. For example, in their meta-analysis of the literature, (Arestis et al. 2015) stated that the findings of the studies suggest that there is a positive and significant effect on economic growth from FD. The same finding has been reported by Ndako (2017) in Nigeria, and Rinosha and Mustafa (2021) in Sri Lanka in Sri Lanka.

In contrast, there is another pool of studies that have found a negative or weak relationship between financial development and economic growth, implying that the more finance, the lower growth. For example, (Ductor and Grechyna (2015) who used panel data for 101 developed and developing countries between 1970 and 2010, and (Elijah and Hamza 2019) in Nigeria, over the period 1981 to 2015.

Similarly, there are several works of literature also that attempted to explore the comparative performance of a bank-based system or a market-based system. However, the results showed links between aspects of the financial system and economic growth, but there is disagreement over how each one influences growth. For instance, (Peia and Roszbach, 2015) contend that while banking development damages growth in developed nations, stock market expansion promotes it. Contrarily, (Durusu-Ciftci et al., 2017) have discovered that the contribution of bank development to economic growth is positive, and more than the stock market.

The literature evaluation offered on the finance-growth nexus in Hungary is limited, and is dominated by cross-country studies, thus, could not be generalized in the context of Hungary.

Further, the findings of the existing studies, however, are apparently inconclusive on the shape of their relationship and whether FD boosts / or harms growth. For example, Varela (2018) uses Hungarian firm-level data to evaluate the impact of the deregulation of international financial flows on the productivity of firms and found that these procedures enhance aggregate productivity by increasing investment in technology. Similarly, Ono and Iwasaki (2022) found that the impact of FD on growth is helpful in some European countries, including Hungarian. Contrarily, Djalilov and Piesse (2011), who examined the impact of economic and financial development policies in Central Asian countries from 1992 to 2008. They used regression, correlation, and Granger causality. Their findings showed that both the transition reform indicator of the European Bank for Reconstruction and Development and the difference between lending and borrowing rates have a negative growth impact. While, credit to the private sector does not show a significant effect. However, some studies found the results vary according to the financial indicators used as proxies of FD. For example, Petkovski and Kjosevski (2014) found that both indicators of credit to the private sector and the ratio of interest margin harm economic growth, but the ratio of quasi-money boosts growth in Transition Economies including Hungary. Sassi and Gasmi (2014) reported that, in contrast to credit to the household sector, credit to the corporate sector reinforces economic growth in a sample of 27 European countries, including Hungary, between the period 1995 and 2012. Contrary, Angjelkovska et al. (2016) found that

the impact of credit to households on economic growth is ambiguous in thirteen transition economies over the period 1995–to 2007, but they confirmed the positive effect of credit to corporations on growth.

From a brief literature review, although the finance-growth nexus has been broadly addressed, the findings show the relationship is not still conclusive and is still under discussion. And the causality issue is not fully resolved, as well as whether the effect of FD on economic growth is positive or negative is not identified. The relationship between finances and development is heterogeneous across countries, regions, and time periods, and the indicator that is used in studies (Cave et al., 2020). In addition, despite the importance of the finance-growth nexus from the viewpoints of both scholars and policymakers, the literature evaluation offered on the finance-growth nexus in Hungary is insufficient. Moreover, those studies are dominated by cross-country studies, thus, could not be generalized in Hungary, since the impact of finance on growth is not the same and is not a one-size-fits-all approach, but, varies according to several factors such as the level of economic development, and country characteristics, which creates the need for further research.

3. Financial System and Economic Growth Experiences of Hungary
3.1. Economic Growth

Hungary was among the first Eastern European countries to start reform and gradually liberalized the economy in the 1980s (Virág, 2020). In the early 1990s, the Hungarian economy saw quick and substantial transformations, and macro-financial imbalances were a great challenge to economic development alongside other macroeconomic factors (Bod, 2017). Following privatization and the transition to the economic market, several economic and financial reforms were adopted, resulting in a speedy recovery and macroeconomic stability.
Hungary witnessed a significant growth rate between 1997 and 2004, even when compared to Western Europe ratios, which aided in convergence with the EU but was incomparable to regional country ratios. Investments were among the main drivers of this growth, besides both export and consumption. However, the growth was also associated often with some persistent slowdown cases and the middle-income trap because of the incorrectly organized economic model, and total factor

productivity has developed relatively slower than capital accumulation (*Magyar Nemzeti Bank* (MNB), 2014). Which caused decreasing investment and reflected in a slowdown in economic performance since 2005. And its growth became lower than the other Visegrád (Czechia, Poland, and Slovakia) countries and was further exacerbated after the crisis broke (Figure 1)

Figure (1): Gross domestic product, PPS, percentage of EU 27
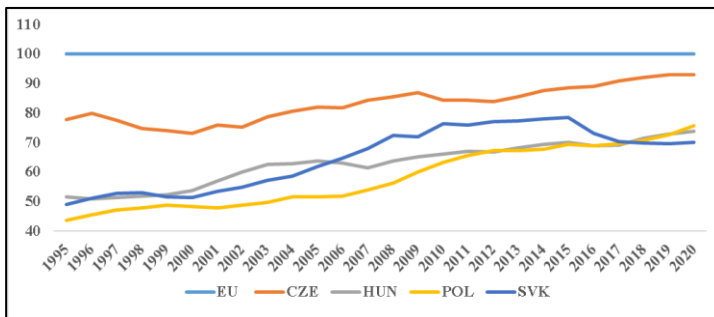
Source: of data: Eurostat.

Surprisingly, during the first decade of the new millennium, Hungary's financial system was among the most advanced in the region, and credit ratios were high even in regional comparison, but economic development rates were considerably below credit growth rates. Contrary to credit growth ratios, the direction of economic growth was downward, as financial deepening drove low productivity sectors, such as real estate and consumption, rather than a significant increase in production capacities (MNB, 2014). As a result, Hungary's economic progress has slowed, and the accumulation of higher indebtedness, particularly external debt, has weakened the financial system and jeopardized macroeconomics.

Moreover, these factors contributed to a strong decline in the Hungarian economy than in the other Visegrád countries during the years of the crisis and needed longer recovery years. However, the turnaround in both fiscal policy in 2010 and then monetary policy in 2013, helped to balance creating a healthy economic structure and strong growth together in recent years. The Hungarian

economy was able to avoid the international growth slowdown in 2019, but, recently, the coronavirus COVID-19 pandemic has significantly affected economic growth. Additionally, the GDP per capita lagged behind its Visegrád peers since 2011, although growth GDP rates in Hungary were one of the highest rates in the EU in recent years, and that has raised still further questions.

3.2. Overview of the Hungarian Banking System

Because of the presence of state-owned banks and a central bank that oversees all banking decisions, the efficiency of the Hungarian banking system in the 1980s was very low, which affected the function of financial intermediation. Besides, the market capitalization and turnover on the capital market were also low. But the changes and the establishment of the two-tier banking system contributed to the improvement of the banking industry.

Following the government rescue plan that aimed to improve the quality of the portfolios of banks after the crisis in 1991, and as a part of the radical transformation of the economy, this sector has witnessed a significant rapid privatization process. In parallel, the regulatory framework was developed, including the introduction of new laws and regulations for the securities market and credit institutions. The shifting in monetary policy also enhanced financial services and investment transactions further.

Indeed, the European integration process served as some of the driving forces behind improved regulation and monitoring. Where Hungary abolished restrictions on capital movements, for example, the Hungarian central bank adopted a new law in 2001 to conform with EU standards (MNB, 2002). Those improvements are reflected in increasing both FD and the contribution of this sector to economic development through both capital accumulation and productivity channels. Especially, financial liberalisation allowed a considerable amount of inflow of foreign investment into the Hungarian economy.
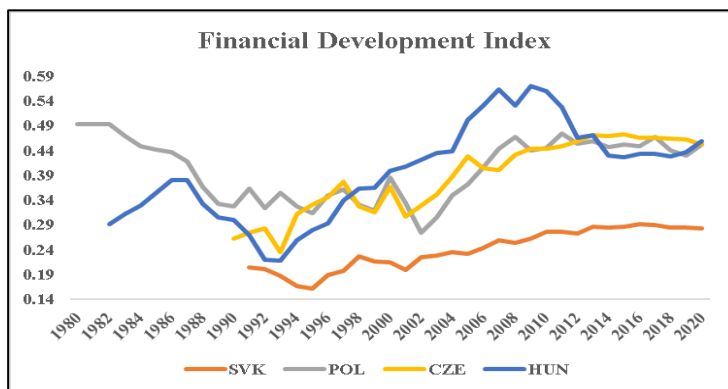
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restrictions on capital movements, for example, the Hungarian central bank adopted a new law in 2001 to conform to EU standards (MNB, 2002). Those improvements are reflected in increasing FD and the contribution of this sector to economic development through both capital accumulation and productivity channels. Especially, financial liberalization allowed a considerable amount of inflow of foreign investment into the Hungarian economy.

The Hungarian banks became integral parts of large international banking systems and adopted the operational modern models. The millennium's turn marked the beginning of a golden age for banks, with the benefits of sufficiently financed, high profitability, modernized services supported from overseas, and a well-developed banking culture (Bod, 2017; Kovács, 2019). The competition and acquisition processes led to a change in the structure of the financial market and increased concentration. Sales channels and regional branch networks significantly expanded, which promoted access to finance, and Hungary's financial system grew to be one of the most advanced in the area, as illustrated in Figure 1.

Figure (1): FD Indexes in Hungary and Some Comparators

Source: Data from Global Financial Development Database, World Bank. https://www.worldbank.org/en/publication/gfdr/ data/global-financial-development-database.

However, with its heavy reliance on foreign funding, Hungary's banking system became increasingly sensitive to external threats with integration into the global economy. And short-term debt, derivatives, and governmental debt ratios

were high at the start of the 2008 financial crisis. As a result, when the international money market froze, Hungary had a liquidity problem, forcing it to ask for an IMF-EU loan. The financial sector faced considerable challenges, and credit banks' portfolios deteriorated significantly, reflected in declining credit supply) and demand. Many problems relating to the sector (e.g., governmental crisis-response measures and overall economic instability) and its clients (they were less inclined to borrow) led to loss of the competitiveness of the financial sector, especially with cost increases (MNB, 2014).

The government has taken several steps to lessen the effects on banks, including bailing them out with capital injections and using unconventional monetary policy measures to address weak bank lending activity. Two such programs are the Funding for Growth Scheme and the Growth Supporting Program, which have had a significant impact on economic growth, the avoidance of a credit crunch, and the turnaround in corporate lending. Those measures contribute to a turnaround in corporate lending, initially focusing on supporting lending to SMEs that started in 2013 and large corporations and households in 2016 (MNB, 2021). In terms of financial development indicators in Hungary: First, the financial depth index, which measures the size of the financial sector relative to the Hungarian economy, shows an increased tendency for financial institutions and markets from the era of transition until the crisis of 2008. Because the banking industry in Hungary controls more financial assets than other financial businesses, the financial depth was larger in institutions than in markets. However, as seen in Figure 2, the depth of institutions does not exceed 0.40 for forty years, but when compared across regions, this metric is high.

Figure (2): Financial institutions depth in V4 countries
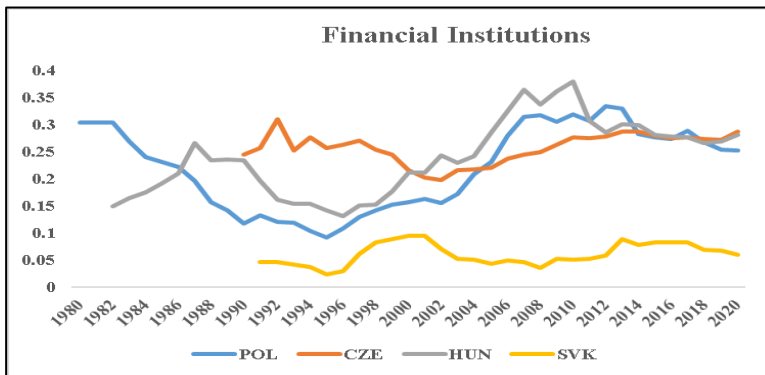
Source: Data from Global Financial Development Database, World Bank

Second, efficiency measures imply that Hungarian banking is characterized by low efficiency, even in regional comparison. These indicators are based on data from the International Financial Statistics (IFS) and the World Bank's Global Financial Development Database (GFDD). The diminished effectiveness of the Hungarian banks is not just a product of the 2008 crisis and its effects because it really began in 2005. For instance, (Pancurova and Lycosa 2013) found that, between 2005 and 2008, Hungarian banks had the lowest efficiency among the v4 countries.

On the other hand, although many steps towards digital convergence have been made by several banks, indicators of those who use internet banking and those who execute payments through the internet Hungary still lags well behind the EU and its regional competitors. Both cost to income and overhead costs to total assets ratios appears that Hungarian banks are still maintaining their relative operational inefficiency. For example, bank overhead costs to total assets ratio was 2.12 % in 2019, which is higher than the EU average, as well as, while the three Visegrád was only 1.53 %. Similar to operating a bank, the bank lending-deposit spread ratio was higher in Hungary (Figure 3).

Figure (3): Efficiency of banking lending
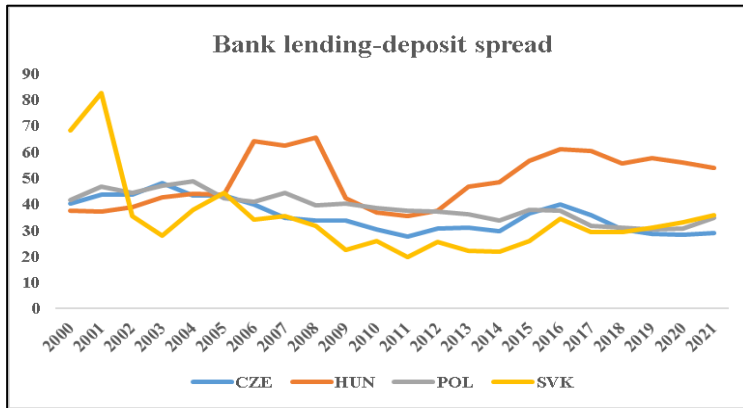
Source: Data from Global Financial Development Database, World Bank

4. Data and Methodology
4.1 Data

The standard literature identified in addition to financial development (FD), control variables (CV) such as trade openness as the sum of exports and imports to GDP (TOP); government final consumption expenditure to GDP (GOV), and (EMP) the number of employees (thousands), are the major determinants of economic growth. Following Schumpeter (1912) we assumed a linear relationship between finance and growth. Thus, we postulate the following model:

$$GDP_t \ = \ \beta_0 + \ FD_t \ + \ CV_t + \ \mu_t \qquad \text{(Eq 1)}$$

Here GDP is real economic growth as measured by the natural logarithm of GDP per capita (LGDP) at constant 2015 U.S. dollars. And FD is financial development as measured by two indicators, the credit to households and NPISHs sector (CHU), and credit to corporations' sector (CCOP), from all sectors, as a percentage of GDP, and CV is a set of three control variables mentioned above.

In the literature, the credit to the private sector is used as a proxy for FD, among other proxies, but the contribution of the credit to each sector to economic growth has different trajectories, in different ways and degrees as well. Thus, looking at lending to two sectors separately may help understand how the FD affected Hungarian growth clearly. A priori, it is expected that all those variables positively affect economic growth according to the supply- leading hypothesis.

According to the EGT, along with investments that come from financial services, the FD contributes to economic growth through several channels, such as the human capital building channel, which reflects in increasing employment and productivity. There is mounting evidence that the countries with high inclusive economic growth and sustainability have high human capital levels and employment, such as Singapore and Japan, so that, this paper uses the EMP variable. Similarly, Keynesian ideology is based on the work of Keynes (1936), who claimed that economic activities would increase through the borrowing of money process from the private sector by the government, which spends them on various programs to contribute to raising internal demand. In the demand context also, effectively allocating financial resources to the manufacturing sector spurs economic growth by raising competitiveness, which is reflected in the volume of trade to the economy, and increasing the number of employed people.

This study is based on annual time series data over the period from 1971 to 2019. The data are got from the World development indicators of the World Bank, United Nations Statistics, international financial statistics, and the conference board's total economy database.

By glimpsing Figure 1. Can be seen a schematic diagram of the FD and economic growth indicators, where we can notice that there appears to be a great similarity, especially credit to household sector indicator, suggesting there is a relationship between them.

Figure (4): Hungarian Economic Growth and FD Indicators – 1971-2019
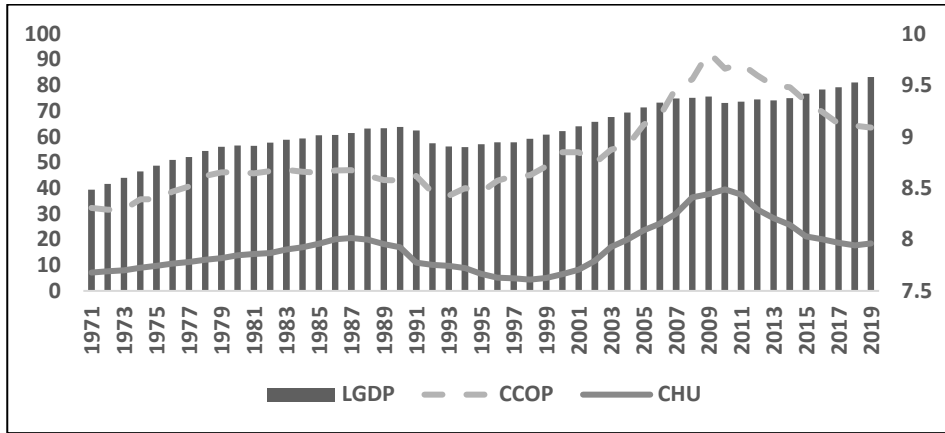
Note: LGDP is the log of GDP per capita at constant 2015 U.S. dollars. CHU is the ratio of credit to households and NPISHs sector (%GDP). CCOP is the ratio of credit to corporations' sector (%GDP).

Source: Author's own work.

Looking at data in Table 1, average value of LGDP is 9.076, and the higher value of the GDP is reached in 2019, while the lower value was in the first year in the series in 1971. Fluctuations in credit to private sector, and especially credit to corporations' sector reflect the ups and downs in international credit market and level of FD. Where the ratios of credit to this sector reached its peak in 2011, and the lower value in the early 1990s.

Table (1): Descriptive Statistics of Variables Under Study

	LGDP	CCOP	CHU	GOV	EMP	TOP
Mean	9.076	53.661	16.755	20.863	4642.735	99.86734
Median	9.036	46.6	16.1	20.624	4446	78.38471
Maximum	9.581	92.9	39.5	27.727	5438	168.2428
Minimum	8.485	31.6	4.4	16.994	3921	46.38165
Std. Dev.	0.264	16.781	9.308	2.018	597.623	45.4181
Observations	49	49	49	49	49	49

Note: Std.Dev is the standard deviation

Source: Author's own work.

4.2 Econometric Methodology

In order to evaluate the assumptions, the paper employed the auto-regressive distributed lag (ARDL) model proposed by Pesaran et al. (2001), because of its below advantages over other cointegration estimating methodologies:

1. It allows for the variables to have different optimal lags;
2. Both the long-run and the short-run can be estimated;
3. can be applied without consideration of the order of integration, such as I (0) or I (1), but not the I (2);
4. It also gives unbiased explanatory coefficients;
5. is a more reliable technique in case of a sample small size like our study.

The following model will evaluate the link between economic growth and FD in Hungary:

$$\Delta GDP_t = \alpha_0 + \sum_{i=1}^{p} \beta_1 \Delta\ GDP_{t-1} + \sum_{i=1}^{k1} \beta_2 \Delta\ CCOP_{t-1} + \sum_{i=1}^{k2} \beta_3 \Delta\ CHU_{t-1} + \sum_{i=1}^{k3} \beta_4 \Delta\ TOP_{t-1} + \sum_{i=1}^{k4} \beta_5 \Delta\ GOV_{t-1} + \sum_{i=1}^{k5} \beta_6 \Delta\ EMP_{t-1} + \delta1 GDP_{t-1} + \delta2\ CCOP_{t-1} + \delta3 CHU_{t-1} + \delta4 TOP_{t-1} + \delta5 GOV_{t-1} + \delta6 EMP_{t-1} + u_t$$

(Eq 2)

Where GDP represents economic growth as a dependent variable, while the other variables are independent variables as identified above, $\alpha0$: Is a constant parameter, Δ: Denotes the first difference operator, β1, …, β6 represent the short-run coefficients, while $\delta1$, …., $\delta6$ represents the long-run effects, μ is white noise errors, and k1, …, k5 are the lag length.

According to Pesaran et al. (2001), the bound test is performed after determining the best lag lengths for the ARDL model.   In order to check whether there is a co-integrating relationship among the dependent variable and independent variables in the long run, could be a through the test the null hypothesis of no cointegration is that H0: $\delta1 = \delta2 = \delta3 = \delta4 = \delta5 = \delta6 = 0$, by calculating F-test

developed by Pesaran, et al., (2001). If this null hypothesis is rejected, suggesting there is a long-run relationship between a dependent variable and the independent variables of the study, the long-run coefficient can be conducted.

While the short-run coefficient can be estimated from the following equation with error correction terms (ECT):

ΔLGDP$t = \alpha0 + \sum_{i=1}^{k} \beta_1 \Delta\ LGDP_{t-1} + \sum_{i=1}^{k} \beta_2 \Delta\ CCOP_{t-1} + \sum_{i=1}^{k} \beta_3 \Delta\ CHU_{t-1} + \sum_{i=1}^{k} \beta_4 \Delta\ TOP_{t-1} + \sum_{i=1}^{k} \beta_5 \Delta\ GOV_{t-1} + \sum_{i=1}^{k} \beta_6 \Delta\ EMP_{t-1} + \lambda$ECTt-1 $+ ut$

(Eq 3)

Where: λ is the speed of adjustment parameter and ECT is the residuals from the estimated co-integration model of equation (3).

However, the ARDL tests do not reveal the effect direction of the relationship among the variables, So, in order to test the causality among the variables, we performed a Granger causality test (1969) to examine the presence and direction of a causal relationship between FD and economic growth (LGDP). The Granger causality test has three different directions, unidirectional causality or one-way causality between Y as a dependent variable and X as independent (e.g., X⇒Y), two-way causality or feedback causality relationship (X ⇔Y), and independence causality (neither variable Granger-causes the other).

The causality connection is founded on a pair of ideas, according to Granger's definition from 1980, the independent variable has predictive power over the dependent variable, because it occurs before its effect on the dependent variable, and it possesses specific knowledge of the future values of its effect as well. In other words, if xt (the independent variable) affects yt (the dependent variable), it would be wise to predict yt based on prior data from xt rather than yt alone. Given these two Granger assumptions about causality, we propose to test the following hypothesis for the identification of a causal effect of FD on GDP:

$$LGDP_t = \delta 0 + \sum_{i=1}^{p} \delta i \, LGDP_{t-i} + \sum_{i=1}^{p} \alpha i \, FD_{t-i} + \mu 1t \qquad \text{(Eq 4)}$$

$$FD_t = \beta 0 + \sum_{i=1}^{p} \beta i \, FD_{t-i} + \sum_{i=1}^{p} \varepsilon i \, LGDP_{t-i} + \mu 2t \qquad \text{(Eq 5)}$$

Where μ is a white Gaussian random vector.

 The null hypothesis that FDt does not cause LGDPt consists in testing the joint nullity of the parameters, $H0$: $\alpha 1 = \ldots = \alpha p = 0$. The null hypothesis that LGDPt does not cause FDt consists in testing the joint nullity of the parameters, $H0$: $\varepsilon 1 = \ldots = \varepsilon p = 0$.

4.3 Hypothesis

Considering the discussion above, the contradictory predictions about the finance-growth nexus in the prevailing economic theories, and insufficient empirical evidence about this relationship in Hungary, the hypotheses that will be tested are:

P:

H1: There is a significant relationship between FD and economic growth in Hungary over the period of 1971 to 2019.
H2: The finance-led growth hypothesis holds in Hungary:
H2a: Hungarian economic growth is influenced positively by the ratios of credit to households over the period of 1971 to 2019.
H2b: Hungarian economic growth is influenced positively by the ratios of credit to the corporation's sector over the period of 1971 to 2019.

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5. Empirical Results
5.1 Unit Root Test

Before estimating the base model to test the above hypotheses, it is necessary to check whether there is perfect collinearity among the variables of our study to determine their order of integration and to ensure that the variables are not I (2) stationary as well, for avoiding spurious results. This study uses different unit root tests. Table 2 shows the unit root test results in Augmented Dicky-Fuller (ADF), Phillips-Perron (PP), and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) tests.

According to the KPSS test, all series are stationary at the level only the share of government consumption to GDP is not. Contrary, in ADF and PP tests, all series are stationary at the first difference and are significant, ranging between 1 or 5 per cent level of significance, only the employment indicator is not stationary according to the PP test. Thus, suggesting that the variables are integrated at I (0) and I (1).

Table (2): Unit Root Test

Variables	At Levels			At 1st Difference		
	ADF	PP	KPSS	ADF	PP	KPSS
LGDP	-0.7374	-1.2294	0.8545	-3.6098	-2.7887	0.117308
Prob.	0.827	0.6542	0.739***	0.0092 ***	0.0063***	0.119
CCOP	-1.8926	-1.3935	0.6742	-2.5657	-5.7608	0.107
Prob.	0.3328	0.5778	0.463**	0.0114**	0***	0.119
CHU	-2.3055	-1.8068	0.3694	-2.8046	-2.8952	0.075117
Prob.	0.1745	0.3729	0.347*	0.006***	0.0047***	0.119
EMP	-1.9647	-1.3269	0.6709	-2.2262	-2.3596	0.1331
Prob.	0.301	0.6096	0.463**	0.0265**	0.1585	0.119*
GOV	-2.5115	-1.8676	0.2611	-5.7574	-5.6938	0.0426
Prob.	0.1192	0.3444	0.347	0***	0***	0.216
TOP	-0.3083	-0.3083	0.813261	-5.4981	-5.8453	0.1289
Prob.	0.9158	0.9158	0.739***	0***	0***	0.119*

Note: ***and** indicate statistical significance at the 1% and 5% levels, respectively.

Therefore, these results give support to the use of the ARDL bounds approach rather than one of the alternative Co-integration tests. On another hand, given that all the variables are stationary at I (0) and I (1), imply the variables are not I (2) stationary, thus, the condition to implement an ARDL model is achieved.

5.1. Testing for Cointegration

Figure.5 shows the optimal model ARDL (3,4,2, 4, 4, 1) which was selected based on 20 different ARDL models and a lower value of Akaike information criteria. Where three lags for economic growth, four lags, and two lags for both FD indicators. Two lags for both government expenditure and a number of employees and one lag for openness trade level have been selected.

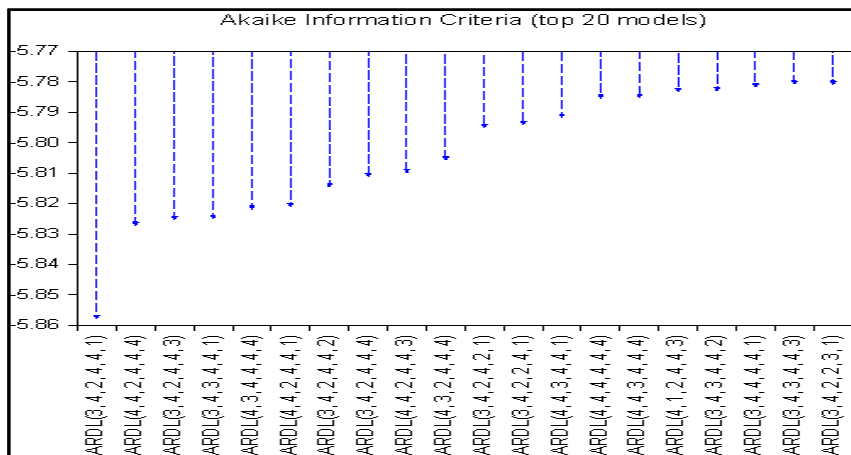Figure (5): The Optimal Model Using the Akaike Criterion

Table (3) shows the results of the bound-test, the calculated F-statistic is 11.70084, which is higher than the lower and upper bound critical values at 1%, 2.5%, 5%, and 10%, and therefore, there is a long-run equilibrium relationship between economic growth and FD in the presence of other macroeconomic variables. Implying that growth in Hungary is affected by the change in the level of FD along with the other determinants.

Table (3): The Bounds Test

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	11.70084	10%	2.08	3
k	5	5%	2.39	3.38
		2.50%	2.7	3.73
		1%	3.06	4.15

Source: Author's own work.

In the second stage, we estimate the long-run coefficients of the selected (3,4,2, 4, 4, 1) ARDL model, which are reported in Table (4), which shows that economic growth as measured by the GDP per capita is associated negatively with FD (proxied by private credit to corporate to GDP), but not statistically significant. Contrarily, the coefficient of FD (proxied by private credit to households and to GDP), is positively associated with economic growth and is significant at 5% level. And a one percentage point (hereafter, pp) increase in the ratio of credit to the household sector will increase economic growth in Hungary by nearly 0.018 pp in the long run. Those suggest that the evidence of the supply-leading hypothesis in the long run in Hungary is vary according to the sector, however, we can arguable it is weak because it doesn't valid in the corporate sector which is the main real economic growth sector.

The results of the effects of FD indicators on growth are inconsistent with the work of (Sassi and Gasmi,2014; Angjelkovska et al., 2016), who confirmed the positive effect of the ratio of credit to corporations on growth, and a negative of the ratio of credit to the household sector.

This result may be owing to several factors, like the Hungarian financial sector being insufficient, which is clearly in all the efficiency indicators and reflected in the low mobilization of domestic savings. Thus, reliance on external finance.

Moreover, mis-allocation of the financial resources to unproductive sectors harms the quality of investment and economic growth. In addition, the large existing

foreign investments in Hungary do not depend on domestic credit, but have alternative funding sources such as access to foreign or intergroup financing, as well, even local-owned companies have access to EU funds at lower costs.

Table (4): Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CCOP	-0.016711	0.01013	-1.649657	0.1139
CHU	0.018053	0.007784	2.319362	0.0305
EMP	0.000324	0.000109	2.983217	0.0071
GOV	0.102635	0.027821	3.689169	0.0014
TOP	0.009177	0.002637	3.479785	0.0022
C	5.31237	1.18189	4.494809	0.0002

Source: Author's own work.

Moreover, the control variables, the employment number, government consumption level, and trade openness are positive and significant at 1% level associated with growth, which means that a higher level of these indicators will enhance economic growth.

Having finished the long-run analysis, we estimate the ARDL-VECM model, the results support the presence of co-integration evidenced by the ECMt-1, which is equal to -0.178559 and significant at 1% level. This means that the speed of adjustment from the short-run in economic growth is corrected by 17.85 % percent each year over a long span of time. This speed of adjustment of 17.8 percent annually is a bit moderate, one pretext for this low speed of adjustment may be the volatility of the financial market, due to the nature of dependence on the international market.

The short-run estimations somewhat don't support the initial findings obtained by the long-run regression, and they have a different sign from the long-run estimation. The effect of both FD indicators on economic growth is not significant. Implying the change in the ratios of credit to both agencies of the private sector in the short run is not important for economic growth. However, the ratio of

credit to household becomes significant and positive for further one order, while lagged credit to corporations for three periods is negative and statistically significant.

Similarly, changes in the share of trade openness don't affect growth as well. However, the two control variables, the employment number, and government consumption level are associated positively and significantly with GDP per capita in short-run estimation.

Table (5): ARDL Error Correction Regression

| Variable	Coefficient	Std. Error	t-Statistic	Prob.
Δ(CCOP)	0.000393	0.000633	0.620761	0.5414
Δ(CHU)	-0.00000772	0.001197	-0.006449	0.9949
Δ(EMP)	0.000185	0.0000335	5.512629	0
Δ(GOV)	0.007223	0.00266	2.715007	0.013
Δ(TOP)	0.000358	0.000243	1.472349	0.1558
CointEq (-1)*	-0.178559	0.0174	-10.26195	0
R-squared	0.998837	Adjusted R-squared		0.997564
F-statistic	784.4445	Durbin-Watson stat		2.074755
Prob (F-statistic)	0	Akaike info criterion		-5.85718

Source: Authors's own work.

The result of the coefficient of determination (R2) shows that about 99.8 % of the value of GDP per capita is caused by the explanatory variables. The Durbin-Watson statistics are 2.075 which shows the absence of serial correlation. Besides, to ensure the fitness of the model and to ascertain its efficiency, Jarque-Bera test is applied for normality testing (see Figure 6), showing that we can't reject the null hypothesis since (p-value) is very high.

Figure (6): Checking Normality
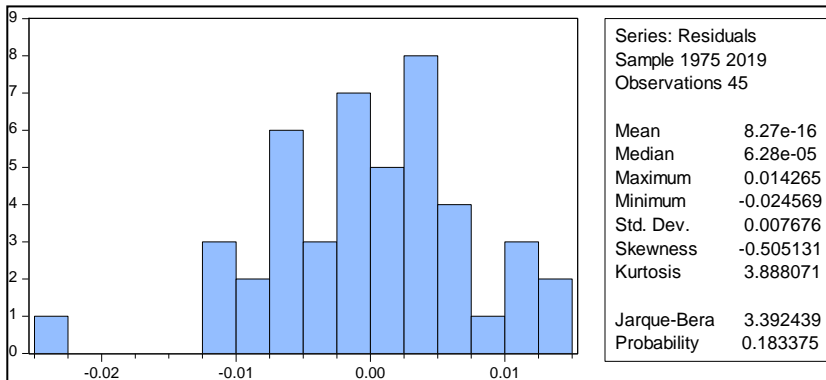
We used also different diagnostic tests, as we see in Table 6, that all P. values are greater than the critical values of 0.05. Thus, the residuals are characterized by being free from heteroscedasticity, and serial correlation between them.

Table (6): Diagnostic Tests

Breusch-Godfrey Serial Correlation LM Test:	F-statistic	1.361381	Prob. F(3,19)	0.2802
	Obs*R-squared	5.640363	Prob. Chi-Square (3)	0.0596
Heteroskedasticity Test: Breusch-Pagan-Godfrey	F-statistic	0.444985	Prob. F (23,21)	0.9692
	Obs*R-squared	14.74514	Prob. Chi-Square (23)	0.9035
Heteroskedasticity Test: ARCH	F-statistic	0.338727	Prob. F(3,38)	0.7974
	Obs*R-squared	1.093895	Prob. Chi-Square (3)	0.7785

Source: Authors's own work.

Similarly, stability tests associated with the selected model have been checked, both the stability tests show the cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squares of recursive residuals (CUSUMQ) estimates are structurally stable (see Figure 7).

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Figure (7): The Plots of the Stability Tests
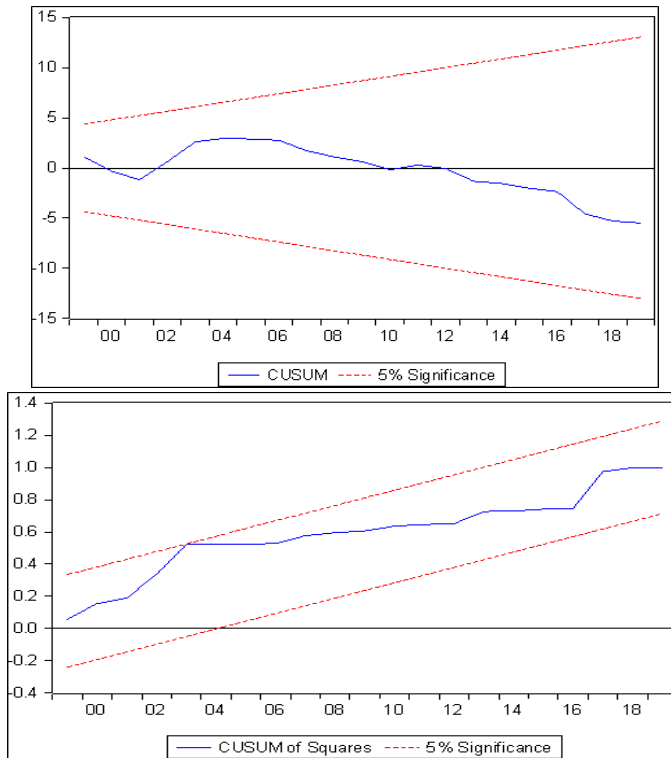
Note: The straight lines represent critical bounds at a 5% significance level.

Test Results for Granger-Causality

After we confirmed, the existence of a long-run equilibrium relationship between variables according to the results of the ARDL cointegration test implies that Granger causality exists at least in one direction, and variables might share similar stochastic trends (Granger, 1988). We should now turn to test for the direction of Granger-Causality. Table 2, shows that the time series is not stationary at the level values but is stationary at the first differences according to the Augmented Dickey-Fuller test (ADF) unit root test. The study used an information criterion, such as the Akaike information criterion and the Schwarz information criterion, to determine the optimal lag length (Table 7).

Table (7): VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-855.1116	NA	1.68E+09	38.27163	38.51251	38.36143
1	-524.3488	558.6215	3494.954	25.17106	26.85728	25.79966
2	-437.8198	123.0635*	403.2824*	22.92532	26.05687*	24.09273*
3	-399.1681	44.66421	454.0737	22.80747	27.38435	24.51368
4	-359.198	35.52893	635.0296	22.63102*	28.65323	24.87604

* Indicates lag order selected by the criterion, LR: sequential modified LR test statistic (each test at 5% level), FPE: Final prediction error, AIC: Akaike information criterion, SC: Schwarz information criterion, HQ: Hannan-Quinn information criterion.

Source: Authors's own work.

From the above table, the optimal lag length according to the AIC criterion is four, thus, when four lags are employed at the 5% level of significance, the Granger causality results in (Table 8), indicating that there is two bi-directional causality between economic growth and both CHU and GOV, giving testimony to the feedback hypothesis between the variables. While the neutrality hypothesis is found in the case of the credit-to-corporate ratio and economic growth. And, there is unidirectional causality flowing from EMP and TOP to LGDP, supply-leading hypothesis holds in Hungary between those variables. Therefore, we can reject both the null hypothesis that CCOP, CHU, GOV, and TOP do not Granger cause

economic growth and the null hypothesis that economic growth does not Granger cause CHU.

These empirical results are in line with the view of the EGT that more credit to households spurs economic growth through stimulate consumer demand and increasing employment. In addition to increasing the competitiveness of the economy. Similarly, are in line with the thinking of the Keynesian hypothesis in the context of public expenditure, and consistent with findings by Abu-Eideh (2015).

Table (8): Test Results for Granger-Causality

Null Hypothesis	Chi-sq	Prob.	Direction of causality
CCOP does not cause GDP	1.54875	0.209	No causality
LGDP does not cause CCOP	1.41386	0.2491	
CHU does not cause GDP	3.15329	0.0254	Bidirectional causality
LGDP does not cause CHU	3.25204	0.0224	
EMP does not cause GDP	3.44451	0.0175	Unidirectional Causality - EMP to GDP
LGDP does not cause EMP	0.32789	0.8574	
GOV does not cause GDP	3.81503	0.011	Bidirectional Causality - GOV to GDP
LGDP does not cause GOV	3.00382	0.0309	
TOP does not cause GDP	2.7658	0.0421	Unidirectional Causality - TOP to GDP
LGDP does not cause TOP	0.83177	0.5139	

Source: Authors's own work.

5.2 Hypothesis Test
First Hypothesis Test

We can test the first hypothesis by looking at the value of the calculated F-statistic (11.70084) of the bound test, which is higher than the lower and upper bound critical values at 1%. Therefore, the null hypothesis, no cointegration is rejected, and the study confirms the existence of long-run cointegration between economic growth and FD in the presence of other macroeconomic variables. Also, the value of the error correction model (ECM-1) has a negative sign and is

significant at 1 percent level, which is other evidence for the existence of short-run cointegration.

The Second Hypothesis Test

We can test the second hypothesis by testing both H2a and H2b and looking at the signs of the coefficients of credit to both agencies of the private sector. According to the (H2a) hypothesis, we can accept it only in the long run since the sign of the coefficient of credit to the household and NPISHs sector (% GDP), is positive and significant. While it is negative in the short run, but is not significant. The Granger test also shows that credit to this sector causes economic growth.

While in the case of testing the (H2b) hypothesis, we rejected the hypothesis in both long-short runs, and even in the Granger causality test, since the sign of the coefficient of the ratio of credit to corporations is not significant. Consequently, the second hypothesis is rejected, and the finance-led growth hypothesis doesn't hold in Hungary in the case of corporate funding.

6. Conclusion and Recommendations

This study examines the relationship between FD and economic growth, whether FD influences economic growth and the degree to which the finance-led growth hypothesis is true in Hungary. Using annual time series data covering the years 1970–2019, the ARDL bound test approach was employed to validate the test study hypotheses. In the empirical analysis, the researchers reached several results, the most important of which are:

1. There is a long-run equilibrium relationship between economic growth and financial development in Hungary in the presence of control of other variables, including trade openness to GDP, government final consumption expenditure to GDP, and the number of employees.
2. Contrary to the EGT, the change in the yearly rate of corporate sector credit to GDP as a proxy for FD has no effect on economic growth.

3. While the change in the annual rate of household sector credit to GDP promotes growth in the short run and doesn't affect it in the long run. This confirms that consumption is an important determinant of economic growth in Hungary in the long run.

4. Consumption in the long run is an important determinant of economic growth, however, is not sufficient for economic growth, it is necessary but it must be also accompanied by introducing policies to support real economic growth such as government expenditure either to provide infrastructure or public goods.

5. The evidence of the supply-leading hypothesis is weak in Hungary in the context of corporate funding.

Those results could be explained by the fact that the Hungarian financial system is characterized by high levels of financial depth and has a range of financial services that are accessible to all sectors and income levels but do not have adequate high levels of efficiency.

The inefficient allocation of resources leads to a weakening of the productive capacity of the economy, where financial institutions allocate credit to the low-productive sectors at a high cost. And on the other hand, the financial system does not contribute to growth through improving through using innovations or through even human capital accumulators, thus, productivity remained low even compared to the European level. This affects also the quality and volume of funds available for investment and increases the possibility of expansion vulnerability to economic and financial shocks. In addition, high costs of lending compared to the Europe region, affect the quality of investments, and lead to an increasing reliance on the external finance market to fund growth, which in turn causes fragility of the system and harms macroeconomics.

Accordingly, policymakers need to target the channels and mechanisms through which financial efficiency influences and transforms the real economy, and ensure stable macroeconomic policies, as well as, financial policy reform should therefore continue to be a priority, focusing on institutional change particularly. In addition, improving Human capital that is a crucial determinant of economic growth

due to it being a factor of productivity and employment together, in particular, the study suggests the importance of increasing the number of employees to GDP per capita. Moreover, increased external trade and an improved investment environment, particularly, the SMEs that are restrained by a frequently changing regulatory environment and entry barriers in network industries are among the obstacles to increasing the contribution of those firms to the national economy in Hungary.

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