
Journal of Public and Nonprofit Affairs

Vol. 9, No. 3

Defining and Measuring Economic Development: A Literature Review and Outlook

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Economic development is an increasingly popular topic in different research areas. However, there is not a definite, categorical, and settled definition for economic development, nor a comprehensive measure that is agreed upon. This study aims to fill this gap through a literature review of the scholarly publications 1950–2020 in all the English-language peer-reviewed journals in the subject areas of public administration and development. On this basis, the article identifies 19 themes as well as 14 types of improvements around which it is possible to group this multi-faceted topic. Specifically, the article highlights for each of the identified themes and types of improvements how economic development is defined and measured. In addition to that, our review reveals issues and research questions that go unaddressed. We conclude the article by providing our recommendations in this regard.

Keywords: Economic Development, Literature Review, Outlook, Definition, Measurement

Introduction

Economic development is far from a homogeneous and well-organized field of applied research. The number of relevant articles on economic development has increased over time. However, there is not a definite, categorical, and settled definition for economic development, nor a comprehensive measure that is agreed upon as there is still a wide variety of different methods and definitions being used to conceptualize and measure economic development. This is a problem for not only researchers trying to make sense of economic development as a practice and phenomenon, it also is a problem for practitioners in the applied field, because without a clear and agreed upon set of definitions for economic development performance, there is no way to know if what practitioners are doing really is effective at accomplishing the intended goals.

In absence of a single agreed upon definition or comprehensive measure, are there patterns or consistent approaches to define and measure economic development? Furthermore, and more specifically, considering that the classical aim of economic development is to improve people's material standards of living, how are these improvements defined and measured? The research summarized in this article aims to shed light on this question, which is worthy of further exploration for several reasons. First, economic development has emerged as an interdisciplinary field of scientific inquiry focusing on the economical, managerial, political,

legal, social, and cultural aspects of this multi-faceted topic. Yet, the issue of defining and measuring economic development has been overlooked thus far, thence the importance to consolidate ‘what we know’ about this topic. By synthesizing and critically analyzing the existing evidence, we are able to identify trends, patterns, and gaps in the research. This is important as it helps to identify areas of research in the economic development literature that have been extensively covered and highlight those areas that would benefit much from attention by researchers in the field. It also allows to form a balanced perspective on the state of knowledge in the field that includes different points of view. Second, no literature review has been conducted so far, to the best knowledge of the authors, with this particular focus on defining and measuring the improvements in people’s material standard of living as a result of economic development efforts, thence the distinctive contribution of this article to the literature. Third, this article bridges the more pure and specific development subject area with economic development focused studies in the public administration subject area, given the extensive interest of the topic for public administration scholars.

A useful starting point to address the aforementioned limitation lies in taking stock of the extant scholarly work in the field. This study aims to fill this gap through a literature review of the scholarly publications 1950–2020 in the public administration and development subject areas, in which ‘economic development’, and ‘measurement’ are mentioned. Further details on our methods are reported in the next section. We identified 372 publications that examine how economic development is defined and measured. The analysis led us to identify a total of 19 themes emerging from the scientific literature, each providing an angle from which to examine this multi-faceted topic from improving the tangible or intangible condition of people to concerns about the production of businesses and their processes, from health as a facet of economic development to the use of Public-Private Partnerships as economic development tools, to how political discourses and opinions may influence economic development outcomes to issues of moving goods and people around in physical spaces.

The article unfolds as follows: First, our methodological approach is presented. Second, we describe the identified corpus of the literature. Third, the overall findings of the review are summarized. Finally, we discuss the state of research on measuring economic development and we provide our recommendations in this regard.

Methodological Approach

Measuring economic development is not a well-defined topic in both the public administration and development literatures. The overall methodological approach of this literature review follows the one proposed by Arksey and O’Malley (2005) for scoping reviews, which have been defined by Mays et al. (2004) as a way to map “the key concepts underpinning a research area and the main sources and types of evidence available, and can be undertaken as stand-alone projects in their own right, especially where an area is complex or has not been reviewed comprehensively before” (p. 94).

The following criteria have been used to identify the studies included in this literature review. First, the so-called ‘grey literature’ was deliberately excluded (Rothstein & Hopewell, 2009) and only peer-reviewed published articles were included. Second, only English-language peer-reviewed journals were included. Third, the journals were pulled from the Scimago Journal & Country Rank database from the public administration and development subject areas. We decided to use the Scimago Journal & Country Rank (SJR) because is a free online database, which makes use of data from Scopus (while Thomson Reuters’ Impact Factor is based on Web of Science database). The SJR algorithm is applied to a larger set of journals (Scopus data instead of Web of Science data) and differently from Thomson Reuters’ Impact Factor takes into consideration not only the number of citation but also the prestige of the citing journals (Mañana-Rodríguez, 2015). Table 4 presents the full list of peer-reviewed journals included in

this review of the literature with the counts of articles found in those journals. Fourth, per each identified peer-reviewed journal, a systematic keyword search within the title and abstract was conducted. The keywords used for the searches were ‘economic development’ and ‘measur*’, which was truncated with an asterisk to include derivative words such as but not limited to measuring, measure, measured. Fifth, the time frame selected for the searches was all the articles published between 1950 and 2020 and articles without years listed were dropped. These selection criteria of the search process yielded to the identification of 372 peer-reviewed journal articles.

Inductive coding (Chandra & Shang, 2019) has been applied to classify the selected literature. Themes, improvements, and methods that were found in previous efforts had keywords associated with them to make analyzing the corpus faster and more efficient. The keywords were curated to align with the themes, improvement, and method categories conceptually to provide us clues about the articles’ contents. The keywords were searched for in the articles’ titles, abstracts, and manual tags using an Excel search function. Table 1 shows the keywords that were used to search for the themes of the articles with the count values of each theme and thematic macro-category. Table 2 shows the keywords that were used to search for the improvements that were being made in the studies, as well as the count values for each improvement category and improvement macro-category. Table 3 shows the keywords that were used to identify the methods that were used in the articles as well as the count values of the number of articles found in each method category. Note, some of the keywords appear in both the themes and improvements. We do not believe this will bias the results because we are simply using the keywords to classify the articles. This is because the keywords that are the same are appropriate to identify their themes and improvements, are mixed with other keywords to make each category unique and are not being used to conduct a quantitative analysis where such conditions can lead to problems with multicollinearity.

The results of the keyword searches were totaled up by their respective theme, improvement, or method. Articles were classified by a combination of reading the article abstracts and titles, and observing the total values of each theme, improvement, and method category. This provided us with the total number of times each category had one of its keywords mentioned in the articles’ titles, abstracts, or manual tags, and the total number of articles that fit into each theme, improvement, or method. To increase coding reliability, each article was independently coded by the two authors (Lipsey & Wilson, 2001). All coding disagreements were discussed by the two authors and resolved thus improving inter-rater reliability (Littell et al., 2008). Information about the theme of the articles was coded along with the information about the nature of the specific improvements that were made in the article’s definition of economic development and the type of method that was used in the article. A total of fifty disagreements were discussed for the themes of economic development, forty-eight disagreements were discussed for the nature of the improvements, and forty-one disagreements were discussed for the method categories. All disagreements were discussed and resolved by the authors. 19 codes were identified with this process for the themes of the articles, as well as 14 types of improvements, and 4 method categories.

In addition to the three sets of coding categories, we extrapolated higher-level macro-groupings to further classify the themes and improvement codes. This was done to discover possible patterns in the articles’ thematic content and the types of improvements that were being targeted or carried out in the articles by their subjects. The themes could be classified by whether they occur as antecedents, tools, or outcomes in economic development. Antecedents are themes that act as prerequisites for economic development of any kind to occur. Tools are used in economic development articles to accomplish the outcomes of economic development, and outcomes are the themes that are the desired goals of economic development. The improvements were classified as to whether they were conceptually physical or social in nature. Physical improvements were improvements that affected the tangible, material world we can directly observe and experience. Social improvements were defined as

intangible improvements to phenomena that only exist in the subjective and inter-subjective experiences of people. The counts of the themes, improvements, and methods reflect the number of articles that were classified under the categories. Some of the themes and improvements had two or more categories applied to them. We feel that these counts are sufficient to understand the content of the literature corpus given the time and resource constraints of this literature review (Arksey & O'Malley, 2005). The method categories are more directly related to the material and only 4 categories were explored. We did not make higher-level classifications for the methods categories because they would not be meaningful in our analysis.

Table 1 lists the codes for the themes used and provides their brief description. It also shows the themes according to their macro-classification type and the keywords that were used to identify them. Table 2 lists the same information for the improvement codes. Table 3 shows the same for the method categories.

Table 1. Coding Theme Type, Definition, Theme Keywords Used, and Article Count

Theme Type in Economic Development	Theme of Economic Development	Brief Theme Definition	Theme Keywords	Count of Articles by Theme
Antecedent	Finance	Focuses on the raising of financial capital or financial markets for business development.	Capital; Financ*; Market**	54
	Politics	Articles that study how political discourses and opinions may influence economic development outcomes.	Legislat*; Opinion*; Politic*	22
	Theoretical	Develops a theory of economic development.	Concept*; Theor*	9
	Antecedent Subtotal			85
Tool	Business development	Concerns the production of businesses and their processes.	Business*; Enterprise* Firm*	19
	Housing	Discusses housing as a facet of economic development.	Home; Hous*	7
	Place-Based	Focuses on a specific place or improving a space for human activity for framing the subject.	Geograph*; Place*; Real estate; Zon*	16
	Planning	Focuses on the practice of planning places instead of the end-products.	Plan*; Urban plan*	10
	Public-Private Partnerships (PPPs)	Concerns Public-Private Partnerships as economic development tools.	PPP; Public-private; Partner*	3

Outcome	Regionalism	Looks at economic development from a regional or larger scale geographic perspective.	Area*; Region*; Rural; Urban-rural	39
	Research	Focuses on the practice of studying economic development.	Literature review; Method*; Regression*; Research*	41
	Tax	Focuses on the effects of taxes or tax policies.	Tax*	7
	Transportation	Discusses transportation, problems related to transportation, and transit provision.	Freight; Highway*; Trans*; Rail; Road	34
	Tool Subtotal			176
	Comprehensive	Refers to economic development in multiple facets.	Develop*; Econom*	166
	Change in Society	Discusses large scale shifts in society and its material conditions.	Change; Transition*	27
	Distribution	Studies the allocation of wealth in the economy.	(in)Equal*; (in)Equit*; Distribut*	23
	Health	Focuses on the physical or psychological health of the research population.	Health*; Medic*	20
	Poverty	Specifically discusses poverty and issues related to poverty.	Poor; Poverty*	14
	Quality of Life	Refers to improvements or improving the tangible or intangible condition of people.	Desirab*; Life; Qualit*	31
	Sustainability	Specifically discusses issues of defining and maintaining economic development reliably over time.	Ecolog*; Environment*; Sustain*	58
	Outcome Subtotal			339

Table 2. Coding Improvement Type, Definitions, Improvement Keywords Used, and Article Count

Category of Improvement Type	Type of Improvement	Brief Improvement Definition	Improvement Keywords	Count of Articles by Type of Improvement
Physical/Tangible	Built Environment	Physical spaces or specific places.	Built environment; Geograph*; Physical space; Place*; Real estate; Zon*	18
	Environmental	Natural conditions in an ecosystem, sometimes as humans affect them.	Ecolog*; Environment*	38
	Generic Wealth Improvement	Refers to general or comprehensive definitions of wealth (e.g., GDP per capita, household incomes, etc.).	GDP; Income*; Wealth*	23
	Physical Health	The well-being of physical human bodies.	Health*; Medic*	17
	Physical Infrastructure Supports	Refers to tangible aspects of publicly available infrastructure systems.	Electric*; Internet; Trans*; Sew*	42
	Place-Based	Specifically targets the per unit or financial productivity of private firms.	Built environment; Geograph*; Physical space; Place*; Real estate; Zon*	2
	Productivity (Resource/Finance)	The allocation of resources in a society, either by public sector policies or market forces.	Produc*; Resource*	73
	Resource Distribution	Physical spaces or specific places.	Alloc*; Distribut*	11
	Physical/Tangible Subtotal			224
Social/Intangible	Anti-poverty	Poverty or anti-poverty efforts to alleviate forms of social and economic exclusion are the main targets.	Exclus*; Inequal*; Inequit*; Poor; Poverty*	34

Business Activity	The effectiveness of business activities or outcomes that are associated with for-profit, private organizations.	Business*; Profit*	15
Innovation/ Research	Refers to governmental systems, policies, or relations in formal institutional arrangements that are condoned by or include government organizations.	Government*; Institut*; Polic*; Public sector;	48
Public Sector/Formal Institutions	Academic study or theoretical development.	Innovat*; Research *	125
Social Infrastructure Supports	Refers to intangible or social service aspects of publicly available infrastructure systems.	Childcare; Educat*; Famil*; Food; Social; Welfare	68
Social Relations	Focuses on relations and dynamics among people and/or organizations.	Relation*; Societ*	30
Social/ Intangible			320
No matches	N/A		10

Table 3. Type of Method Category, Keywords Used, and Count of Articles by Methodology Category

Methodology Category	Brief Description of Methodology Category	Methodology Category Keywords	Count of Articles by Method Category
Mixed Methods	Studies that use both qualitative and quantitative data to answer their research questions.	Embedded; Explanatory; Exploratory; Mixed Metho*; Transformative; Triangulation	37
Qualitative	Studies that use non-numerical data to answer their research questions.	Case Stud*; Ethnograph*; Focus Group; Grounded Theor*; Historic*; Interview; Phenomenolog*; Qualitative	79
Quantitative	Studies that use numerical data to answer their research questions.	Causal; Correlational; Descriptive; Experimental; Logit; OLS; Panel Data; Probit; Quasi-Experimental; Regress*; Time-Series/Time Series	165
Theoretical	Studies that rely on or expand upon theories in the field to answer their research questions.	Analysis; Confirmed Theory; Logic*; Model*; Phenomen*; Principle; Theor*; Theory Building	83
N/A			8

Describing the Corpus of Literature

Before discussing the emerging measures and approaches in the literature of economic development, data will first be described. Most of the journals we found articles in belong to the development subject area (N=69), followed by public administration (N=35). The number of articles found in development subject area journals (N=298) was significantly higher than the number of articles found in public administration journals (N=69). Only one journal, *Public Administration and Development* is counted in both subject categories with some articles published in it (N=5). As shown in Table 4, the most prolific journals with the highest number of eligible published articles are *Asian Economic Journal* (N=26), *Transportation* (N=22), and *Food Security* (N=16) in the development subject area; *Human Resources for Health* (N=7), *The Innovation Journal* (N=7), *Canadian Public Policy* and *Nonprofit Policy Forum* (tied, N=5) in the public administration subject area.

As shown in Table 1, most of the articles have been classified as Outcomes of economic development (N=339). Among those, the majority of them were coded as Comprehensive (N=166), followed by Sustainability (N=58), and Quality of life (N=31). There were 176 articles classified as Tools

Table 4. List of Peer-Reviewed Journals and Article Counts

Journal Name & Article Category	Count of Publication Title
Development	298
Asian Economic Journal	26
Transportation	22
Food Security	16
Empirica	15
Bulletin of Indonesian Economic Studies	14
NJAS - Wageningen Journal of Life Sciences	12
International Journal of Water Resources Development	11
Development Studies Research	11
Asia-Pacific Journal of Regional Science	10
Development Policy Review	10
Energy, Sustainability and Society	9
Journal of Development Studies	9
International Journal of Urban Sustainable Development	9
Land Degradation & Development	8
Environment and Development Economics	8
Maritime Studies	7
Transition Studies Review	6
Corporate Social Responsibility and Environmental Management	5
World Development	5
East Asia	4
Journal of International Development	3
Central Asian Survey	3
Sustainable Development	3
Journal of Quantitative Economics	3
African Journal of Science, Technology, Innovation and Development	3
Behavioral Sciences	3
Applied Economic Perspectives and Policy	3
Journal of Development Effectiveness	3
Journal of Agribusiness in Developing and Emerging Economies	3
Journal of Contemporary China	3
Development and Change	3
Organizations and Markets in Emerging Economies	2
Journal of Rural Studies	2
SSRN Electronic Journal	2
International Journal of Urban and Regional Research	2
European Journal of Development Research	2
African Development Review	2
Revista Desarrollo y Sociedad	2
Development in Practice	2
Food Policy	2
Tourism Management	2
Ekonomika	1
Journal of Development Economics	1

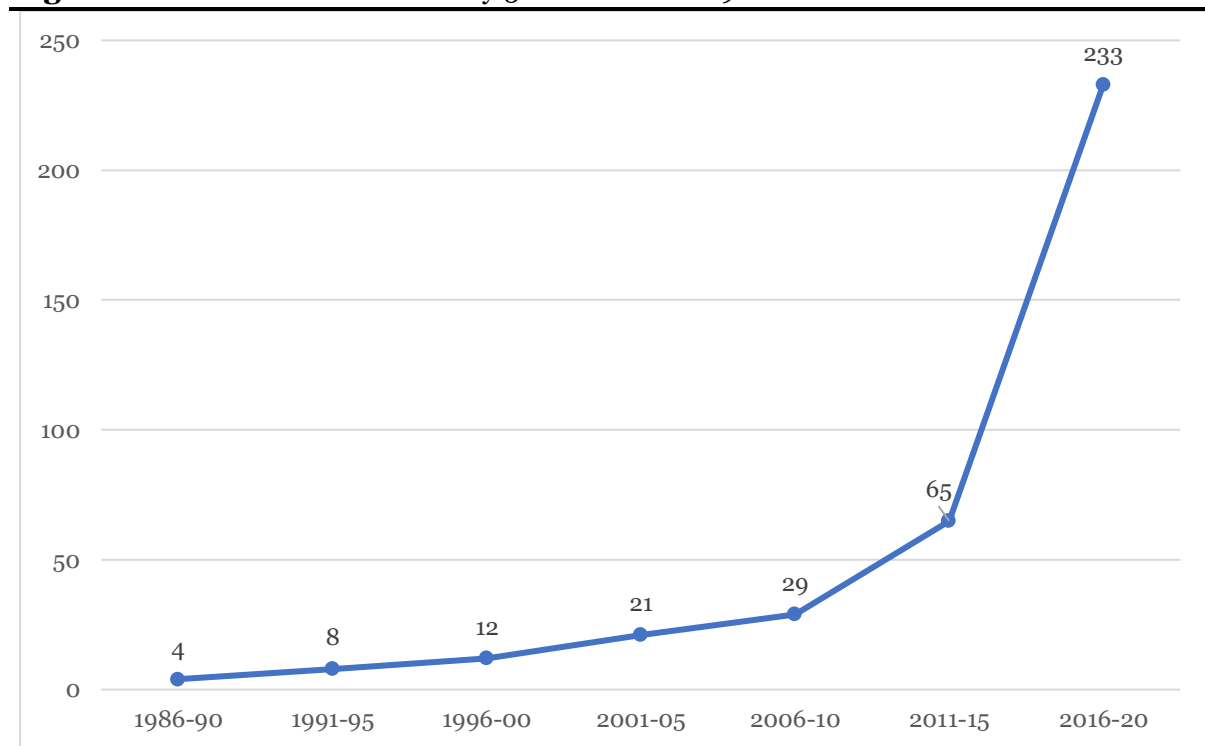
Development Southern Africa	1
Housing Policy Debate	1
Evaluation	1
Community Development Journal	1
Journal of Contemporary East Asia Studies	1
Journal of East Asian Studies	1
Finance: Theory and Practice	1
Journal of Evolutionary Studies in Business	1
Journal of Contemporary African Studies	1
Journal of Evolutionary Studies in Business-JESB	1
Contemporary Southeast Asia	1
The Journal of Agricultural Education and Extension	1
Oxford Development Studies	1
Economic Development Quarterly	1
Social Enterprise Journal	1
Futures	1
Studies in Comparative International Development	1
Journal of Regional Science	1
The China Quarterly	1
Economic History of Developing Regions	1
Journal of Water and Land Development	1
Journal of Infrastructure, Policy and Development	1
Canadian Journal of Development Studies	1
African Journal of Food, Agriculture, Nutrition and Development	1
Environmental Hazards	1
Journal of Developing Societies	1
Public Administration	69
Human Resources for Health	7
The Innovation Journal	7
Nonprofit Policy Forum	5
Canadian Public Policy	5
Public Administration Review	3
Environment and Planning C: Politics and Space	3
Research & Politics	3
Science and Public Policy	3
Journal of Educational Administration	3
Contemporary Economic Policy	2
Education Sciences	2
Regional Research of Russia	2
Society and Economy	2
Review of African Political Economy	1
Public Performance & Management Review	1
Education Inquiry	1
Journal of European Public Policy	1
Regulation & Governance	1
Journal of Public Affairs	1
International Public Management Journal	1
Socialinė teorija, empirija, politika ir praktika	1

Informacijos mokslai	1
Environment and Planning C: Government and Policy	1
International Journal of Public Administration	1
Human Service Organizations Management, Leadership & Governance	1
International Journal of Public Sector Management	1
Policy and Society	1
Revista de Administração Pública	1
Policy Design and Practice	1
Social Policy & Administration	1
Policy Studies Journal	1
Politologija	1
Area Development and Policy	1
Journal of Public Affairs Education	1
Journal of Public Budgeting, Accounting & Financial Management	1

of economic development with (N=41) articles focused on Research, (N=39) on Regionalism, and (N=34) articles on Transportation. Finally, the remaining 85 articles were classified as Antecedents of economic development, (N=54) of them focusing on the raising of financial capital or financial markets for business development (Finance), (N=22) of them studying how the political discourse and opinions may influence economic development (Politics), and (N=9) articles on theories on economic development (Theoretical). As apparent from these numbers, and as explained above in the methodology section, it is clear that some articles were double coded because, for example, they discussed both a tool of economic development and an associated outcome.

Similarly, Table 2 reports the article count for coding improvement types and definitions. 320 articles were coded as Social/Intangible and 224 as Physical/Tangible. Among the Physical/Tangible, the Productivity of economic wealth and/or resources was detected in (N=73) instances, Physical Infrastructure and Support had (N=42), and Environmental improvements was found in (N=38) articles. Among the Social/Intangible, the object of improvement most studied is on governmental systems, policies, or relations in formal institutional arrangements that are condoned by or include government organizations (Public Sector/Formal Institution), which was detected in (N=125) articles, while social infrastructure support was detected in (N=68) articles. Finally, Table 3 shows that quantitative methods were most often used in the literature on economic development (N=165), theoretical was second (N=83), qualitative was third (N=79), and mixed methods was a distant fourth (N=37). A total of (N=8) articles did not identify the research method(s) used in the article abstracts or titles.

To illustrate scholars' interest in the concepts of this review of the literature, Figure 1 shows the number of publications by 5-year interval from the year of our first article to 2020 (1986–2020). The first two decades saw a relatively low number of articles published meeting our review criteria, ranging from four publications between 1986 and 1990 to 29 publications between 2006 and 2010. A rapid increase in the interest of researchers is apparent from 2010, with 65 articles published between 2011 and 2015 and 233 articles published between 2016 and 2020. One possible explanation of this peak in the 2011–2020 decade is the resources allocated to scientific research by the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), passed by Congress and the Obama Administration to lead the country through the worst economic crisis since the Great Depression.

Figure 1. Number of Publications by 5-Year Interval 1986–2020

The diversity of themes that were discussed also increased in each decade. Table A in the Appendix shows the distribution of the article themes over time. The largest thematic sub-category that was discussed between 1986 and 1990 was Business Development (N=2). In the first half the 1990s, there was an increase in the number of articles in the Comprehensive theme increased to 7 followed by Transportation and Sustainability (tied, N=3). In the early 2000s, Comprehensive (N=9), Finance (N=5), and Sustainability (N=4) themes were most common. In the late 2000s, Comprehensive (N=10), Sustainability (N=6), and Research (N=5) were most common. In the first half the 2010s, the most common themes were Comprehensive (N=33), Sustainability (N=14), and Finance, Transportation, and Politics (tied, N=6). Between 2016 and 2020, the number of articles in the Comprehensive category jumped to 102, the number of articles in the Finance category jumped 39, followed by articles in the Sustainability category (N=31). The distribution of the themes over the years shows what the literature was focusing on during that time period.

Table B in the Appendix shows the distribution of articles by their improvement sub-category assignment over time. In the 1986–1990 period, the article's subject worked to improve the Public Sector/Formal Institutions sub-category (N=2). The remaining sub-categories in the 1980s were Physical Infrastructure Supports and Productivity with (N=1) article each. In the first half of the 1990s, the emphasis was again on Public Sector/Formal Institutions sub-category (N=4), and Productivity (N=2). The Public Sector/Formal Institutions and Productivity sub-categories were tied in third place (N=4) in the second half of the 1990s, preceded by Physical Infrastructure Support (N=6) and Environmental (N=5). In the first half of the 2000s, the emphasis was again on Public Sector/Formal Institutions and Productivity sub-categories (N=6), followed by Physical Infrastructure Support (N=5) and Social Infrastructure Support (N=4). A similar partition also applies to the second half of the 2000s. In the first half of the 2010s, the Public Sector/Formal Institutions sub-category shot up with 24 articles. It is joined by Public Innovation and Research and Social Infrastructure both tied with 11 articles, and Generic Wealth Improvement (N=11) sub-categories as the top three sub-categories for the decade. The 2016–2020 interval saw once again the Public Sector/Formal

Institutions sub-category with 76 articles, followed by Productivity (N=48) and Social Infrastructure Supports (N=45).

Results

This section of the article discusses the results found among the themes the corpus was divided into. It starts with the findings in the macro-categories of the themes before going on to discuss the improvements. Within each heading will be a discussion on the macro-categories, followed by the sub-categories that composed them. We will briefly discuss all theme and improvement sub-categories within their respective macro-categories, taking note of what was more and less commonly discussed. Table C in the Appendix lists all the themes in alphabetical order, with the articles' citations and a list of the metrics that were commonly used in each sub-category.

Macro-Categories of the Themes

Antecedents of Economic Development

There were 85 articles whose outcomes fit the role of an antecedent in economic development. Finance was by far the largest of the Antecedent sub-categories (N=54). The other two antecedent categories we were able to identify were Politics (N=22) and Theoretical (N=9).

We can see from the articles' thematic classifications and subject matter that decisions related to the Antecedents are important decisions to have settled before attempting economic development in a place. Economic development cannot occur without considering the politics and the different facets of politics that happen in a place. Nor can economic development occur without an understanding of how projects will be financed and valued after they are finished, and a theoretical vision of how social dynamics work and how conditions can be for a community of people. There appear to be opportunities for researchers to further develop our understanding of how economic development affects and is affected by the financial opportunities that are available for communities. Researchers and practitioners can work together with the communities they serve to develop a better theoretical understanding of economic development's potential to benefit life and living conditions.

Tools of Economic Development

There were several more articles that had a sub-category theme classified in the Tools of economic development macro-category (N=176). Three of the sub-categories under the Tools macro-category had more than thirty articles classified under them. The top three sub-category themes under Tools of economic development that were studied were Research (N=41), Regionalism (N=39), and Transportation (N=34). These three categories make sense having the largest number of articles, since studying economic development (Research) is an important part of economic development itself, looking at economic development from a regional or larger scale geographic perspective (Regionalism) is one of the major foci in economic development and Transportation is without any doubt an important tool in economic development. Minor, yet still important, sub-categories of themes include Business development (N=19), which is another very important tool for economic development; Place-based (N=16), Planning (N=10), Public-Private Partnership (N=3). We can see how each of these Tool-type themes can conceptually be linked together to give substance to economic development outcomes. Important facets of ensuring the attractiveness and prosperity of a place (e.g., place-based policies, planning, taxes) are minor themes in the most influential journals. But it makes sense that Research and Regionalism would be the most represented categories of economic development.

Outcomes of Economic Development

The largest macro-category theme that was covered in the economic development literature centered on conceptual Outcomes of economic development (N=339). Most of these articles were conceptually oriented to the Comprehensive sub-category (N=166), which included holistic and generic measurements of economic development, such as Gross Domestic Product (GDP) per capita or median income. Sustainability (N=58), Quality of Life (N=31), Change in Society (N=27), and Distribution (N=23) sub-categories were also well represented, addressing environmental or social sustainability, large scale shifts in society and its material conditions, and the allocation of wealth in the economy. Minor Outcome themes with less than or equal to twenty articles include Health (N=20), and Poverty (N=14).

The number of articles in each of the Outcome sub-categories were not surprising. GDP and income are the most used metrics of economic development, even in articles that did not have comprehensive wealth generation as its main theme. But the relatively low attention to Quality-of-Life is concerning, especially since this sub-category refers to improvements or improving the tangible or intangible condition of people. Furthermore, although represented with respectively 27 and 23 articles, we were expecting more attention to how economic development activities can change and affect societies (Change in Society) and how wealth is allocated in the economy (Distribution). This also leaves a significant gap in our understanding of economic development practices. A possible explanation is that Change in Society is harder to describe and conceptually operationalize for empirical research. We can make use of historical data and events from societies and cultures that have long ceased to exist to get a better understanding in the Change in Society sub-category.

Macro-Categories of the Improvements

Physical/Tangible

Articles under the Physical/Tangible improvement macro-category represented a large portion of the total number of articles (N=224). The distribution of articles among the sub-categories of improvements was relatively even spread, though there are some champions. The Productivity (Resource/Finance) and Physical Infrastructure Supports were the largest of the Physical/Tangible articles with, respectively, 73 and 42 articles. This suggests economic development is intimately related to the allocation of resources in a society, either by public sector policies or market forces and the availability and presence of physical infrastructures. Environmental had (N=38) articles, followed by Generic Wealth Improvement (N=23), Built Environment (N=18), and Physical Health (N=17). Resource Distribution has 11 articles, while Place-based has 2 articles.

We can see again that issues related to distribution are not widely researched in journals of empirical research as well as are the articles in the Place-based sub-category. Interestingly, the implications of economic development on health doesn't have much representation in this corpus either. This is unfortunate, because the ways we make and distribute wealth do have profound implications for how healthy each and all of us are. Built Environment and Generic Wealth Improvements are also moderately well studied.

Social/Intangible

Interestingly, the Social/Intangible macro-category of improvements had a lot more articles overall than the Physical/Intangible macro-category with (N=320). This was mainly driven by the number of articles that focused on the Public Sector/Formal Institutions improvement category (N=125) and the Social Infrastructure Supports category (N=68). This is interesting, because it shows that a lot of attention is paid to what the government does in the economic

development literature. This suggests that the public sector and the intangible or social service aspects of publicly available infrastructure systems that exist in a society are important and closely related to the topic of economic development, even more so than the activities that businesses choose to do to add value. In particular, the special attention paid to social infrastructure in the economic development is interesting because it is practically much more difficult to find a way to independent prosperity without public services that ensure a solid floor on which people can build their lives and livelihoods. Having the costs of food alleviated through programs like EBT/SNAP, or the cost of healthcare kept low by a universal, single-payer public system are just two easy examples of social services that can reduce overall individual living expenses and allow every person's current income to take them that much further towards a satisfying and comfortable life. Beyond these two largest sub-categories of improvements, the remaining articles were clustered under improvements to Innovation/Research (N=48), Anti-poverty (N=34), Social Relations (N=30), Business Activity (N=15). These other sub-categories under the Social/Intangible macro-category (Innovation/Research, Anti-poverty, Social Relations, Business Activity) were also somewhat well represented in the corpus of literature. Social Relations was the most surprising Social/Intangible sub-category with a considerable number of articles attributable to it. This shows how, despite the physical and technical aspects of economic development, the process remains a primarily human-driven phenomenon that requires multiple, possibly competing stakeholders, to somehow come together to get things done for their communities. Surprisingly, Business Activity is the least studied sub-category in the corpus.

Measurements of Economic Development Themes

Table C in the Appendix lists all the themes in alphabetical order, with the articles' citations and a list of the metrics that were commonly used in each sub-category. After having presented all the themes we identified from the corpus of the literature and the types of improvements in economic development, we now present a selection of economic development indicators and indexes used in the articles identified in the literature review. Overall, the metrics and indexes used to measure economic development for each of the identified themes have both construct and face validity: the operationalization of economic development aligns with the underlying theoretical frameworks identified in each of the 19 themes and they appear, on their face, to measure what they claim to measure. There are of course some disputable cases listed in Table C, but overall the assessment is positive.

We now present and discuss some of these indicators and indexes for the most relevant identified 19 themes. Economic development in the theme Business Development, which concerns the production of businesses and their processes, has been measured by using the 'Firm survival rate' and the 'Ease of Doing Business index' provided by World Bank respectively in Fertala (2008) and in Dong and Manning (2017). In the theme Change in Society, which discusses large scale shifts in society and its material conditions, economic development has been measured, among the others, with 'foreign trade development', 'improved investment potential', and 'efficient foreign debt management' as in the article by Gogorishvili (2016). Economic development in the theme Comprehensive, which refers to economic development in multiple facets, has been measured by using 'private GDP growth' by Afonso and Jalles (2016). In the theme Distribution, which focuses on the allocation of wealth in the economy, economic development has been measured, among the others, with 'reductions in regional economic inequalities' by Bonfiglio et al. (2016) and with 'infant mortality rate' by Salahuddin et al. (2020). Economic development in the theme Finance, which focuses on the raising of financial capital or financial markets for business development, has been measured, for example, by using the 'Venture capital performance for early entrepreneurs' in Baldock (2016).

In the theme Health, which focuses on the physical or psychological health of the population, economic development has been measured, among the others, with ‘skill of birth attendants in low- and middle-income countries’ by Lassi et al. (2016) and with ‘adoption rate of information communication technologies in healthcare’ by Baridam and Govender (2019). Economic development in the theme Housing, which discusses housing as a facet of economic development, has been measured, for example, by using the ‘interrelationship between bank credits, unemployment, interest rates, and house rental prices’ in Kupčinskas and Paškevičius (2020). Economic development in the theme Planning, which focuses on the practice of planning places instead of the end-products, has been measured, for example, by using the ‘urban sprawl prevention into rural land’ and ‘network density for transportation project’ in Walter and Scholz (2007). In the theme Poverty, which discusses poverty and issues related to poverty, economic development has been measured, among the others, with these indicators ‘non-monetary village saving’ by Musunguzi (2016) and with ‘probability of borrowing’ and ‘amount borrowed’ in Twine et al. (2019). Economic development in the theme Sustainability, which specifically discusses issues of defining and maintaining economic development reliably over time, has been measured, for example, by using a series of livability indicators in Danielaini (2018) and biodiversity indicators in Gauselmann and Marek (2012). Finally, in the theme Transportation, which discusses transportation, problems related to transportation, and transit provision, economic development has been measured, among the others, with these indicators ‘firm growth’ and ‘foreign trade volume’ in Ying et al. (2017).

Discussion

This article investigates the manifold definitions and measures of economic development. Through it, we hope to provide a step forward in scholarly understanding and use of this concept of economic development in both the public administration and development literatures. We have identified nineteen themes and could group them into three macro-categories. We also found fourteen single types of improvements that were made in the articles, around which it is possible to group this topic, and presented some of the indicators used to measure economic development in the analyzed literature. This should make it easier for practitioners and researchers alike to make sense of their local economies’ conditions, regardless of how they choose to approach the question of economic development.

We condensed the different metrics of economic development in the disciplinary literature of public administration and economic development to thematic categories of the articles’ subject outcomes and targeted improvements. Through examining the distribution of these categories across the articles and across the macro-categories we grouped them into, the timing of the articles by classification, we can identify sub-topics and metrics of economic development that have been well-covered by the journals included in the analysis as well as aspects of economic development that have not been well-studied. We can see that Outcomes and Tools of economic development are the major thematic macro-categories in the literature, with less attention being placed on the Antecedents of economic development. Likewise, there is less attention in the literature to articles that focuses on making Physical/Tangible improvements compared to those that focus on Social/Intangible improvements, suggesting that, even though, both macro-categories are important and studied in the literature, there is much focus and interest on Social/Intangible improvements, at least in more recent years. In addition, we presented a selection of economic development indicators, and indexes used in the article identified in the literature review. Some indicators and indexes used in the articles in our corpus seem to be more refined and better constructed than others, but our assessment of these indicators and indexes is overall positive as it seems they both display both construct and face validity and can be considered good indicators based on identified criteria in the literature (see, for example, Hatry, 2006; Poister et al., 2015; Van Dooren et al., 2015).

We also can see how the subject matter of economic development has expanded its scope since the late-20th century, as well as how some themes and improvements remain constantly relevant over time. Finance is one of those themes that consistently appears to be relevant over time, along with the comprehensive approach to understanding economic development, along with an orientation to Sustainability. However, the variety of the themes and improvements that were discussed in the articles increased with each decade, along with the overall number of articles that fit our selection criteria.

We especially note that the public sector in economic development frequently dominates as a theme and topic of improvement in the top journals of public administration and development across time periods and places. This is likely because we selected from the development and public administration literatures, which would limit the perspective from the for-profit private sector in economic development practice. It is not clear from our current data if adding articles from the business literature would have contributed much to the analysis, since business-oriented literature is more concerned with the individual firms and not the larger economic environment in which the firms operate that economic development focuses more specifically on.

Conclusion

Before we begin the conclusion, we would like to call attention to the fact that the definitions of economic development that are used can have significant effects on peoples' lives. Economic development can be defined in many ways by many different people with competing interests and perspectives that are mutually exclusive. Some commonalities across the articles include a common interest in producing more desirable outcomes in our experienced world and a focus on material conditions within a social context. However, there is no true single definition of economic development in either the concepts or the measurements. Any single measurement, theory, or definition of economic development anyone may be able to produce would only really be one facet of economic development among dozens of others. Therefore, economic development as a topic can only be studied when it is broken down into combinations of conceptual parts. We observed this when we read studies on the politics behind the policies, developing businesses and business processes, improving quality of life indicators, and the organizations that undertake the processes of economic development. There are several ways to conceptualize and study economic development that are relevant facets of economic development processes and outcomes.

For researchers, studying economic development is simply a matter of defining one's research questions appropriately and using the appropriate methodology to answer the questions, a well understood and accepted concept. But for applied practitioners of economic development, the diversity of meanings behind economic development must be considered and clarified as a matter of public policy. Economic development measurements must be considered sound and relevant from both the perspective of the governments making the policy and the stakeholders whom the policies affect. This is not a trivial problem with obvious or easy solutions. As we have observed, economic development can mean different things to different people and interest groups, and consequently can be measured with a variety of indicators and indexes. Which definition gets selected and used by the private and public sectors can be seen as a matter of political competition among stakeholders and within the society itself. How a society defines economic development and what criteria get selected for use in economic development can affect how well the population lives independently of the policymakers' intended outcomes. If a political faction can identify and maintain the most democratically desirable and ecologically sustainable economic conditions that are possible, for as many people as possible, we may be able to intentionally improve conditions for the whole population despite the limitations that naturally exist for us.

Another major takeaway that comes from this research is the inextricably interconnected nature of economic development's different strains of thinking. Each theme should not be thought of as an independent and separate concept. Instead, antecedents of economic development (i.e., finance, politics, and economic development theory) as well as economic development tools (i.e., planning, housing, transportation, PPPs, etc.) are all aspects that could (and should) be integrated with the others to produce the desired outcomes of economic development (i.e., change in society, sustainability, health, etc.). Likewise, the improvements are more than single goals in isolation of each other. Instead, they can frame the process and practice of economic development in combinations with each other to operationalize research and praxis more effectively. Even the themes and improvements with fewer papers should be further explored and integrated into the conceptualization of economic development. This is because economic development itself is, apparently, really a composite of the interactions among each of the themes and improvement goals in dynamic social action arenas (Ostrom, 2005).

On the other hand, practitioners must account for the different definitions of economic development that are used by different stakeholders in the broader society. If a common definition of economic development does not technically exist, it is impossible to tell what kinds of work practitioners should do, or if their labor is productive. Practitioners need to have a definition of economic development to do their work effectively, but also cannot ever have one that is objectively true and universally applicable. For practical purposes, people who work in economic development may consult with communities and stakeholders to find what is relevant and wanted by the stakeholders of the communities they are working with. Some common measurements may emerge that practitioners can use from these discussions, but they could not be considered objective or universally applicable measurements. By allowing conversations at the local level to steer the definitions that are practically used by businesses and governments, we may get something more valuable and useful than a universal academic theory of economic development: A plurality of democratically negotiated local visions for how life is and could be intentionally worked towards and maintained for people.

A further recommendation that follows the defining of the research topic is to be aware of how measurements that are used fit with the research topic and practicing officials' goals. It is, in fact, worth the effort to develop appropriate custom measurements based on what researchers are studying and stakeholders find relevant. A variation of GDP is a ubiquitous way to define an economy and its development in the literature. However, it cannot be used as a shorthand variable for general economic development, as it only measures the estimated value of all economic activity in a geographically bounded population. Other relevant questions for both the researcher and practitioner include but are not limited to, the social and ecological sustainability of a project or policy, the democratic will and desire of most people living in a society, and what happens to wealth once it is produced in a local place need to be expressed in more specific terms than the blunt measurements used when computing technology and data were not as available and accessible. GDP is too simple of a measurement that does not capture the nuances of the social and material factors that make economic development possible.

Poverty is another example of a popular metric that may be accidentally overused, as how poverty is defined can affect how and what is measured. In the U.S., poverty is defined by being below or within range of an income threshold. It does not account for other forms of deprivation and exclusion (such as race, gender, sexuality, class, and disability status) that can, under certain socially made circumstances, be made to hinder economic activity among the excluded and for the greater social whole. Failing to account for the social roots of poverty by using an income-threshold measurement can skew results of research and suggest policy regimes that will more likely have an incomplete effect on the problem. Instead, researchers can be more creative and choose metrics that get at precisely what they are attempting to study but are not currently popular in the literature to at least see if better outcomes can be achieved.

The field of economic development is broad enough to accommodate a diversity of metrics that have their time and place in the world of research; the only constraints are the appropriateness and accessibility of the data to answer the questions.

However, this is different for practitioners. People who do economic development work must be more attentive to the needs and interests of their home constituencies. The definitions of economic development practitioners use can change over time with the changing circumstances of their territorial jurisdictions and the people who live within them. However, the stakes are significantly higher for practitioners to get those definitions correctly tailored for their communities under various circumstances. Peoples' material well-being and future health is on the line with practitioners' work, so the margin for error in logic, perception, and practice is reduced.

Before concluding this article, the limitations of this review of the literature must be addressed here. The focus on two subject areas—development and public administration—may have prevented the inclusion of relevant articles in our sample thus potentially leading to selection bias issues. Future studies should start from a comprehensive search through a variety of databases and find a narrow list of studies to review, particularly considering their relevance to the topic(s) of review. In addition, future studies, in order to better conceptualize and measure economic development, should involve economic development practitioners in their research. One such way would be to conduct interviews or focus groups with them, drawing implications for real-world economic development policy. Alternatively studying state and local economic development initiatives and/or economic development organizations may provide valuable insights as to how economic development is defined and measured.

Economic development is a diverse and growing field of empirical research. Which specific methods are used is not as important a question, as is the matching of research questions to the methods that are used. The common orientation of economic development towards improving material conditions in human societies can be used to distinguish between policies and ideas that work and those that do not work as well or at all. Provided the methods are valid for the research questions, due diligence is done with the data, and there is a sustained, authoritative will from enough people to do so, it may be possible to empirically solve material challenges experienced at the social level.

Disclosure Statement

The author declares that there are no conflicts of interest that relate to the research, authorship, or publication of this article.

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Appendix

Table A. Counts of Theme Sub-Categories by 5-Year Interval

5-Year Interval	Coding	Count of Coding
1986–1990	Business development	2
	Comprehensive	1
	Regionalism	1
	Research	1
	Transportation	1
1991–1995	Comprehensive	4
	Change in society	1
	Finance	1
	Place-based	1
	Quality of life	1
	Regionalism	1
	Tax	1
	Transportation	1
1996–2000	Comprehensive	7
	Transportation	3
	Sustainability	3
	Regionalism	2
	Change in society	2
	Distribution	1
	Finance	1
	Health	1
	Housing	1
	Research	1
2001–2005	Comprehensive	9
	Finance	5
	Sustainability	4
	Distribution	3
	Health	3
	Change in society	2
	Regionalism	2
	Research	2
	Business development	1
	Tax	1
2006–2010	Comprehensive	10
	Sustainability	6
	Research	5
	Change in society	4
	Place-based	3
	Regionalism	3
	Transportation	3
	Business development	2
	Finance	2
	Planning	2
	Politics	2

	Quality of Life	2
	Distribution	1
	Health	1
	Poverty	1
	Public-private partnership	1
	Theoretical	1
2011–2015	Comprehensive	33
	Sustainability	14
	Finance	6
	Politics	6
	Transportation	6
	Business development	5
	Quality of life	4
	Regionalism	4
	Research	4
	Planning	3
	Poverty	3
	Distribution	2
	Place-based	2
	Theoretical	2
	Health	1
	Housing	1
2016–2020	Comprehensive	102
	Finance	39
	Sustainability	31
	Research	28
	Regionalism	26
	Quality of life	24
	Change in society	18
	Transportation	18
	Distribution	16
	Health	14
	Politics	14
	Place-based	10
	Poverty	10
	Business development	9
	Theoretical	6
	Housing	5
	Planning	5
	Tax	5
	Public-private partnerships	2

Table B. Counts of Improvement Sub-Categories by 5-Year Interval

5-Year Interval	Type of Improvement	Count of Coding
1986–1990	Public Sector & Formal Institutions	2
	N/A	1
	Physical Infrastructure Supports	1
	Productivity (Resource or Financial)	1
1991–1995	Public Sector & Formal Institutions	4
	Productivity (Resource or Financial)	2
	Built-Environment	1
	Resource Distribution	1
	Social Infrastructure Supports	1
1996–2000	Physical Infrastructure Supports	6
	Environmental	5
	Productivity (Resource or Financial)	4
	Public Sector & Formal Institutions	4
	Innovation & Research	3
	Generic Wealth Improvement	2
	Built-Environment	1
	Business Activity	1
	Physical Health	1
	Social Infrastructure Supports	1
2001–2005	Productivity (Resource or Financial)	6
	Public Sector & Formal Institutions	6
	Physical Infrastructure Supports	5
	Social Infrastructure Supports	4
	Anti-Poverty	3
	Built-Environment	1
	Business Activity	1
	Environmental	1
	Generic Wealth Improvement	1
	Innovation & Research	1
2006–2010	Public Sector & Formal Institutions	10
	Productivity (Resource or Financial)	7
	Social Infrastructure Supports	6
	Anti-Poverty	3
	Environmental	2
	Innovation & Research	2
	Physical Infrastructure Supports	2
	Social Relations	2
	Built-Environment	1
	Generic Wealth Improvement	1
2011–2015	Public Sector & Formal Institutions	24
	Innovation & Research	11
	Social Infrastructure	11
	Environmental	9
	Anti-Poverty	8
	Physical Infrastructure Supports	7

	Social Relations	6
	Productivity (Resource or Financial)	5
	Built-Environment	5
	Generic Wealth Improvement	4
	N/A	3
	Physical Health	3
	Resource Distribution	1
	Place-Based	1
2016–2020	Public Sector & Formal Institutions	76
	Productivity (Resource or Financial)	48
	Social Infrastructure Supports	45
	Innovation & Research	31
	Social Relations	22
	Environmental	21
	Physical Infrastructure Supports	21
	Anti-Poverty	20
	Generic Wealth Improvement	16
	Physical Health	15
	Built-Environment	10
	Resource Distribution	9
	Business Activity	8
	N/A	6
	Place-based	2

Table C. Measurements of Economic Development Themes

Theme of Economic Development	Sampled Article Citations	Sampled Measures of Economic Development
Business Development	<ul style="list-style-type: none"> • Cammarano, D., Valdivia, R. O., Beletse, Y. G., ... Antle, J. (2020). Integrated assessment of climate change impacts on crop productivity and income of commercial maize farms in northeast South Africa. <i>Food Security</i>, 12, 659–678. https://doi.org/10.1007/s12571-020-01023-0 • Fertala, N. (2008). The shadow of death: Do regional differences matter for firm survival across native and immigrant entrepreneurs? <i>Empirica</i>, 35, 59–80. https://doi.org/10.1007/s10663-007-9051-2 • Dong, S. X., & Manning, C. (2017). Labour-market developments at a time of heightened uncertainty. <i>Bulletin of Indonesian Economic Studies</i>, 53(1), 1–25. https://doi.org/10.1080/00074918.2017.1326201 	<ul style="list-style-type: none"> • Maize production, Poverty rate. • Firm hazard rate, Firm survival rate. • Sector performance, Inflation, Unemployment, Ease of Doing Business index (World Bank).
Change in Society	<ul style="list-style-type: none"> • Adego, T., Simane, B., & Woldie, G. A. (2019). The impact of adaptation practices on crop productivity in northwest Ethiopia: An endogenous switching estimation. <i>Development Studies Research</i>, 6(1), 129–141. https://doi.org/10.1080/21665095.2019.1678186 • Dzemydienė, D., Kurmis, M., & Baikštienė, V. (2020). Possibilities to support heterogeneous mobile services in vehicle communication networks. <i>Informacijos Mokslai</i>, 90, 80–95. https://doi.org/10.15388/Im.2020.90.51 • Gogorishvili, I. (2016). Foreign economic policy of Georgia since gaining the independence. Georgische aussenwirtschaftspolitik nach der gewinnung der unabhängigkeit. <i>Eesti Majanduspoliitilised Väitlused</i>, 24(1), 1–20. https://doi.org/10.15157/tpep.v24i1.12984 	<ul style="list-style-type: none"> • Likelihood of higher crop yields. • Adoption of information communication technologies in road transportation. • Foreign trade development, improved investment potential, making of efficient foreign debt management system.
Comprehensive	<ul style="list-style-type: none"> • Afonso, A., & Jalles, J. T. (2016). Economic performance, government size, and institutional quality. <i>Empirica</i>, 43(1), 83–109. https://doi.org/10.1007/s10663-015-9294-2 • Bangura, Y. (1994). Economic restructuring, coping strategies and social change: Implications for institutional development in Africa. <i>Development and Change</i>, 25(4), 785–827. https://doi.org/10.1111/j.1467-7660.1994.tb00536.x • Bartels, F. L., & Koria, R. (2014). Mapping, measuring and managing 	<ul style="list-style-type: none"> • Private GDP growth. • Social compromise and cohesion, Institutional socialization and loyalties, Overarching sets of values, Political authority to enforce rules. • Skills ICT Capability/Capacity,

African national systems of innovation for policy and development: The case of the Ghana national system of innovation. *African Journal of Science, Technology, Innovation and Development*, 6(5), 383–400. <https://doi.org/10.1080/20421338.2014.970427>

Unsophisticated markets,
Deficient fiscal policy,
Reduced organizational risks
among governments, medium-
and high-tech industries,
knowledge-based institutions,
and arbitrageurs/liaisons.

Distribution

- Bonfiglio, A., Camaioni, B., Coderoni, S., Esposti, R., Pagliacci, F., & Sotte, F. (2016). Where does EU money eventually go? The distribution of CAP expenditure across the European space. *Empirica*, 43(4), 693–727. <https://doi.org/10.1007/s10663-016-9354-2>
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- Reductions in regional economic inequalities.
- Transformative leadership, employee empowerment, and job satisfaction (Power distributions and dynamics).
- Infant mortality rate, Infant mortality rate under 5 (health outcomes).

Finance

- Abdul-Rahaman, A., & Abdulai, A. (2020). Social networks, rice value chain participation and market performance of smallholder farmers in Ghana. *African Development Review*, 32(2), 216–227. <https://doi.org/10.1111/1467-8268.12429>
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- Paddy price, Quantity of paddy traded, and Net returns.
- Venture capital performance for early entrepreneurs.
- An assessment of development partnerships among higher education institutions, industry, and governments.

Health	<ul style="list-style-type: none"> Baridam, B. B., & Govender, I. (2019). ICT influence on the healthcare sector in the Niger delta region: ICT policy at an organizational level. <i>Development Studies Research</i>, 6(1), 142–151. https://doi.org/10.1080/21665095.2019.1680302 Fleckenstein, T., & Lee, S. C. (2020). Roads and barriers towards social investments: Comparing labour market and family policy reforms in Europe and East Asia. <i>Policy & Society</i>, 39(2), 266–283. https://doi.org/10.1080/14494035.2019.1688617 Lassi, Z. S., Musavi, N. B., Maliqi, B., Mansoor, N., de Francisco, A., Toure, K., & Bhutta, Z. A. (2016). Systematic review on human resources for health interventions to improve maternal health outcomes: Evidence from low– and middle–income countries. <i>Human Resources for Health</i>, 14(10), 1–20. https://doi.org/10.1186/s12960-016-0106-y 	<ul style="list-style-type: none"> Adoption rate of information communication technologies in healthcare delivery. Family and labor policy expansion. Skill of birth attendants in low– and middle– income countries.
Housing	<ul style="list-style-type: none"> Obi, C., Bartolini, F., & D’Haese, M. (2020). International migration, remittance and food security during food crises: The case study of Nigeria. <i>Food Security</i>, 12(1), 207–220. https://doi.org/10.1007/s12571-019-00990-3 Kupčinskis, K., & Paškevičius, A. (2020). An assessment of house loans cointegration with macro variables in selected euro zone countries. <i>Ekonomika–Vilniaus Universitetas</i>, 99(2), 39–58. https://doi.org/10.15388/Ekon.2020.2.3 	<ul style="list-style-type: none"> Remittances from migrants on food insecurity. Interrelationship between bank credits, unemployment, interest rates, and house rental prices.
Place-Based	<ul style="list-style-type: none"> Klasen, S. (2008). Economic growth and poverty reduction: Measurement issues using income and non-income indicators. <i>World Development</i>, 36(3), 420–445. https://doi.org/10.1016/j.worlddev.2007.03.008 Perkins, F., Yuxing, Z., & Yong, C. (1993). The impact of economic reform on productivity growth in Chinese industry: A case of Xiamen special economic zone. <i>Asian Economic Journal</i>, 7(2), 107–146. https://doi.org/10.1111/j.1467-8381.1993.tb00104.x Puppim de Oliveira, J. A. (2017). Breaking resilience in the urban system for improving resource efficiency: The case of the waste sector in Penang, Malaysia. <i>International Journal of Urban Sustainable Development</i>, 9(2), 170–183. https://doi.org/10.1080/19463138.2016.1236027 	<ul style="list-style-type: none"> Income for the poor, Average age of respondents and partners, Average education of respondents between 20 and 30, Maximum education of respondents between 20 and 30, Children under 5 & 1 survival rate, Stunting Z-score of children aged 1 to 3. Municipal-level industrial sector performance. Municipal solid waste system

		resilience and resource efficiency.
Planning	<ul style="list-style-type: none"> • Soliman, A. M. (2016) Collective planning process: A driving seat for formalising urban informality in Egypt. <i>International Journal of Urban Sustainable Development</i>, 8(1), 25–48, https://doi.org/10.1080/19463138.2015.1046076 • Camison, C., & Monfort-Mir, V. M. (2012). Measuring innovation in tourism from the Schumpeterian and the dynamic-capabilities perspectives. <i>Tourism Management</i>, 33(4), 776–789. https://doi.org/10.1016/j.tourman.2011.08.012 • Walter, A. I., & Scholz, R. W. (2007). Critical success conditions of collaborative methods: A comparative evaluation of transport planning projects. <i>Transportation (Dordrecht)</i>, 34(2), 195–212. https://doi.org/10.1007/s11116-006-9000-0 	<ul style="list-style-type: none"> • Internal R&D, Acquisition of equipment, advanced hardware, and software, Acquisition of other external knowledge, Training for innovation activities, Introduction of innovation to the market, Design, other preparations for production and/or distribution. • Urban sprawl prevention into rural land through the planning process. Actor diversity, Use of knowledge integration, High network density for transportation project success.
Politics	<ul style="list-style-type: none"> • Alemán, E., & Kim, Y. (2015). The democratizing effect of education. <i>Research & Politics</i>, 2(4). https://doi.org/10.1177/2053168015613360 • Mischen, P. A., & Sinclair, T. A. P. (2017). Small is beautiful: Knowledge management and budget reform in a rural county. <i>The Innovation Journal</i>, 22(1). https://innovation.cc/document/2017-22-1-2-small-is-beautiful-knowledge-management-and-budget-reform-in-a-rural-county/ • Rwamigisa, P. B., Birner, R., Mangheni, M. N., & Semana, A. (2018). How to promote institutional reforms in the agricultural sector? A case study of Uganda's national agricultural advisory services (NAADS). <i>Development Policy Review</i>, 36(5), 607–627. https://doi.org/10.1111/dpr.12318 	<ul style="list-style-type: none"> • Democratization effects of education • Small government capacity to reform. • Coalition forming, Program resilience.
Poverty	<ul style="list-style-type: none"> • Jenkins, J., Peters, K., & Richards, P. (2020). At the end of the feeder road: Upgrading rural footpaths to motorcycle taxi-accessible tracks in Liberia. <i>NJAS–Wageningen Journal of Life Sciences</i>, 92(1), 1–12. 	<ul style="list-style-type: none"> • Market integration, Education and health facility access, Jobs.

	<p>https://doi.org/10.1016/j.njas.2020.100333</p> <ul style="list-style-type: none"> • Musinguzi, L. K. (2016). The role of social networks in savings groups: Insights from village savings and loan associations in Luwero, Uganda. <i>Community Development Journal</i>, 51(4), 499–516. https://doi.org/10.1093/cdj/bsv050 • Twine, E. E., Rao, E. J. O., Baltenweck, I., & Omore, A. O. (2019). Are technology adoption and collective action important in accessing credit? Evidence from milk producers in Tanzania. <i>European Journal of Development Research</i>, 31(3), 388–412. https://doi.org/10.1057/s41287-018-0158-z 	<ul style="list-style-type: none"> • Non-monetary village saving and loan association impacts on the poor. • Probability of borrowing, Amount borrowed
Public-Private Partnerships	<ul style="list-style-type: none"> • Akullo, D., Maat, H., & Wals, A. E. J. (2018). An institutional diagnostics of agricultural innovation; Public-private partnerships and smallholder production in Uganda. <i>NJAS–Wageningen Journal of Life Sciences</i>, 84(1), 6–12. https://doi.org/10.1016/j.njas.2017.10.006 • Husti, I., & Mahyarni, M. (2019). Islamic leadership, innovation, competitive advantages, and performance of SMEs in Indonesia. <i>East Asia (Piscataway, N.J.)</i>, 36(4), 369–383. https://doi.org/10.1007/s12140-019-09325-7 • Kutcher, S., Horner, B., Cash, C., Fors Lopez, M., & Amparo Pascual, M. (2010). Building psychiatric clinical research capacity in low- and middle-income countries: The Cuban–Canadian partnership project. <i>The Innovation Journal</i>, 15(1). https://innovation.cc/document/2010-15-1-9-building-psychiatric-clinical-research-capacity-in-low-and-middle-income-countries-the-cuban-canadian-partnership-project/ 	<ul style="list-style-type: none"> • Innovative changes in agricultural practices. • Islamic leadership’s impact on small- and medium-sized enterprises. • Improvements in care, Healthcare-related human resources.
Quality of Life	<ul style="list-style-type: none"> • Ahmed, M. H., Geleta, K. M., Tazeze, A., & Andualem, E. (2017). The impact of improved maize varieties on farm productivity and wellbeing: Evidence from the east Hararghe zone of Ethiopia. <i>Development Studies Research</i>, 4(1), 9–21. https://doi.org/10.1080/21665095.2017.1400393 • O’Donoghue, T. A. (1995). Educational restructuring gone astray in paradise? The Papua New Guinea experience. <i>Journal of Educational Administration</i>, 33(1), 79–90. https://doi.org/10.1108/09578239510157053 • Sinyolo, S., Mudhara, M., & Wale, E. (2014). Water security and rural 	<ul style="list-style-type: none"> • Consumer expenditure per adult. • Primary school curriculum changes in Papua New Guinea. • Water security’s relation to food consumption in the Mzinyathi District of South Africa.

household food security: Empirical evidence from the Mzinyathi district in South Africa. *Food Security*, 6(4), 483–499.
<https://doi.org/10.1007/s12571-014-0358-0>

Regionalism

- Andersson, I., & Cook, I. R. (2019). Conferences, award ceremonies and the showcasing of ‘best practice’: A case study of the annual European week of regions and cities in Brussels. *Environment and Planning. C, Government & Policy*, 37(8), 1361–1379.
<https://doi.org/10.1177/2399654419825656>
- Brunow, S., & Brenzel, H. (2012). The effect of a culturally diverse labour supply on regional income in the EU. *Empirica*, 39(4), 461–485.
<https://doi.org/10.1007/s10663-012-9201-z>
- Giacomelli, G., Annesi, N., Barsanti, S., & Battaglia, M. (2019). Combining ideal types of performance and performance regimes: An integrated framework of analysis of performance management systems for public organizations. *The International Journal of Public Sector Management*, 32(7), 721–740. <https://doi.org/10.1108/IJPSM-11-2018-0246>
- Institutional, spatial, and scalar dynamics from award ceremonies, Learning and education at conferences, Positive effects for the host.
- Regional GDP per capita.
- Goal autonomy, Incentives and rationale, Measurement, Incorporation, Resource use.

Research

- Anderson, D. M., & Whitford, A. (2018). Designing systems for the co-production of public knowledge: Considerations for national statistical systems. *Policy Design and Practice*, 1(1), 79–89.
<https://doi.org/10.1080/25741292.2017.1415782>
- Chongvilaivan, A., Taniguchi, K., & Rabanal, R. (2016). Impacts of road access on subjective well-being in timor-leste. *Asian Economic Journal*, 30(1), 91–114. <https://doi.org/10.1111/asej.12086>
- Jurlina Alibegović, D., & Kordej De Villa, Ž. (2008). The role of urban indicators in city management: A proposal for Croatian cities. *Transition Studies Review*, 15(1), 63–80. <https://doi.org/10.1007/s11300-008-0171-6>
- National statistic system design.
- Subjectively reported well-being of road users.
- Urban indicators, Environmental urban patterns, Flows, Environmental quality, Human-oriented sustainability, Pollution flows, Local business development, Informal employment, Formal employment, PPP deals, Locally raised government revenue (Line-item budgeting or Program budgeting).

Sustainability	<ul style="list-style-type: none"> • Danielaini, T. T., Maheshwari, B., & Hagare, D. (2018). A framework for evaluating ecohydrological-based liveability in a rapidly urbanising region of Indonesia. <i>International Journal of Urban Sustainable Development</i>, 10(3), 222–240. https://doi.org/10.1080/19463138.2018.1531874 • Gauselmann, A., & Marek, P. (2012). Regional determinants of MNE's location choice in post-transition economies. <i>Empirica</i>, 39(4), 487–511. https://doi.org/10.1007/s10663-012-9200-0 • Gunnlaugsson, G., & Einarisdóttir, J. (2018). Iceland and development aid in the era of the MDGs: A case study of an alma ata inspired primary healthcare project in southern Malawi. <i>Development Studies Research</i>, 5(sup1), S14–S26. https://doi.org/10.1080/21665095.2018.1494510 	<ul style="list-style-type: none"> • Livability indicators, Personal, Residential, Neighborhood, Regional, and Watershed. • Marine biodiversity. • Physical infrastructure, Health facilities, community, staff houses, Financial, costs by payment category, Logistics, presence for ambulance-type services, Staff, payment, numbers, Out-patient number and condition, Antenatal care, Presence of skilled-birth assistant, Newborn care and survival rate, Community-based services, Immunization, Outreach efforts, Malaria prevention, HIV/AIDS prevention, Outcomes, Infant and maternal mortality.
Taxes	<ul style="list-style-type: none"> • Darvas, Z. (2020). Economic growth and income distribution implications of public spending and tax decisions. <i>Society and Economy</i>, 42(4), 351–365. https://doi.org/10.1556/204.2020.00025 • Jensen, N. M. (2017). The effect of economic development incentives and clawback provisions on job creation: A pre-registered evaluation of Maryland and Virginia programs. <i>Research & Politics</i>, 4(2). https://doi.org/10.1177/2053168017713646 • Morrissey, O., Von Haldenwang, C., Von Schiller, A., Ivanyina, M., & Bordon, I. (2016). Tax revenue performance and vulnerability in developing countries. <i>The Journal of Development Studies</i>, 52(12), 1689–1703. https://doi.org/10.1080/00220388.2016.1153071 	<ul style="list-style-type: none"> • EU fiscal policy to reduce inequality and promote GDP growth. • Job creation. • Public revenue shocks.

Theoretical	<ul style="list-style-type: none"> • Cárdenas Hurtado, C. A., Hernández Montes, M. A., & Torres Gorrón, J. E. (2015). A statistical analysis of heterogeneity on labour markets and unemployment rates in Colombia. <i>Desarrollo y Sociedad</i>, 75(75), 153–196. https://doi.org/10.13043/dys.75.4 • Tillotson, A. R., & Tropman, J. (2014). Early responders, late responders, and non-responders: The principal-agent problem in board oversight of nonprofit CEOs. <i>Administration in Social Work</i>, 38(4), 374–393. https://doi.org/10.1080/23303131.2014.916244 • van der Heijden, J. (2020). Understanding voluntary program performance: Introducing the diffusion network perspective. <i>Regulation & Governance</i>, 14(1), 44–62. https://doi.org/10.1111/regg.12192 	<ul style="list-style-type: none"> • Differences in skilled labor supply, Participation incentives, and Age structure. • Presence and speed of accountability from Board of Director actions to non-profit CEOs. • Network characteristics and voluntary program design.
Transportation	<ul style="list-style-type: none"> • Berechman, J., & Paaswell, R. E. (2005). Evaluation, prioritization and selection of transportation investment projects in New York City. <i>Transportation (Dordrecht)</i>, 32(3), 223–249. https://doi.org/10.1007/s11116-004-7271-x • Talley, W. K. (1986). A comparison of two methodologies for selecting transit performance indicators. <i>Transportation (Dordrecht)</i>, 13(3), 201–210. https://doi.org/10.1007/BF00148616 • Ying, C., Wei, L., & Jian, L. (2017). Financing innovation in the Yangtze River economic belt: Rationale and impact on firm growth and foreign trade. <i>Canadian Public Policy</i>, 43(2), S122–S135. https://doi.org/10.3138/cpp.2016-077 	<ul style="list-style-type: none"> • Transportation and economic costs and benefits to transit projects. • Public transit indicators. • Firm growth, foreign trade volume.