Urban Prosperity without Growth?

Sustainable City Development with Focus on Human Flourishing

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Abstract

The world is urbanising at an unprecedented rate. Cities are perceived to be potential solutions as well as causes of the many problems our society faces. On the one hand, cities are considered the driving forces of prosperity through innovation, wealth creation and growth. On the other hand, cities are perceived to be the roots of urgent environmental and social issues. In fact, the very notion of prosperity, based on infinite economic growth that exhausts the Earth's limited resources and exploits humans, is increasingly being questioned. This thesis aims to investigate the links between economic growth and redefined prosperity as suggested by Tim Jackson (2009). The findings of the study suggest that economic growth does not significantly contribute to the selected aspects of the prosperity. By operationalising the revised definition of prosperity, this thesis argues against the notion of economic growth as a crucial component of urban prosperity proposed by UN-Habitat (2013). In particular, the focus was placed on the most important aspect of the prosperity, quality of life, to which UN-Habitat (2013) agrees. The salutogenic approach is used to support the attempt to shed light on the aspects beyond basic needs. In developed countries, cities need to shift away from the growth imperative to achieve developments that lead to a more sustainable version of prosperity that considers non-materialistic human flourishing. The method of Lee (2014), was modified and applied for conducting the research.

Keyword: Prosperity, Economic Growth, Capabilities, Salutogenesis, Sustainability

Word count: 13,405

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List of Abbreviations

CPI – City Prosperity Index

DNK – Denmark

EU – European Union

GDP – Gross domestic products

GDP/Cap – GDP per Capita

LMP – Labour market programme

OECD – The Organisation for Economic Co-operation and Development

QoL – Quality of Life

SDI – Social Development Index

SWE – Sweden

UN – United Nations

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1. Introduction - what?

1.1 Problems - Why care?

To date, more than half of the world's population lives in urban areas (United Nations, 2011). Cities are driving forces and centre of economic, technological, and human development (Polèse, 2005; UN-Habitat, 2013; Bettencourt et al., 2007; Porter, 2000). Searching to improve their quality of life, people move to cities (Taylor, 2012). At the same time, growing cities also pose a number of challenges such as pollution, excessive resource usage and energy consumption, climate change mitigation, congestion, spatial competition, safety and health issues, inequality, poverty, and segregation (Burton, 2000; McCormick et al., 2013). Cities in wealthy nations have attained relatively high standards of living (United Nations, 2011); however, they also contribute to local and global environmental problems (Mori and Christodoulou, 2012). Moreover, these cities face social challenges including inequalities and health issues (United Nations, 2011; UN-Habitat, 2013). London, for instance, is considered one of the most prosperous and wealthiest cities in the world (Bettencourt et al., 2007; UN-Habitat, 2013); however, it is also "the home to the single greatest concentration of poverty to be found in Western Europe" (Hennig and Dorling, 2013) Economic growth has been dominating urban policies despite its negative environmental and social consequences at both local and global scales (UN-Habitat, 2013; Longlands, 2013; Grimm et al., 2008). Therefore, scholars are increasingly questioning this continuous hegemony of the growth imperative (Jackson, 2009; Victor and Rosenbluth, 2007; Mikkelson, 2013; Meadows et al., 2004; Rees, 2012).

In essence, cities are able to improve the life of people, but are also the source of many environmental and social problems. Moreover, the prevalence of economic growth interferes with solving the problems cities are facing. However, given the increasing importance of cities, overemphasising economic growth needs to be reconsidered.

1.2 Long story short

The findings of this study suggest that economic growth does not contribute to prosperity in major cities in developed countries. This way, this thesis supports the arguments made against economic growth that is believed to improve prosperity and quality of life (Jackson, 2009; Victor and Rosenbluth, 2007).

It contributes to the debate on urban development and growth by arguing that economic growth needs to be regarded as a consequence, not a crucial component, of development that focuses on 'redefined' urban prosperity, people having opportunities to discover and pursue what they consider meaningful and fulfilling.

The challenge for developed nations[1] lies in minimising environmental impacts such as excessive resource usage and greenhouse gas emissions, while keeping or improving the living standard. To achieve this, economic growth is arguably unnecessary (Victor and Rosenbluth, 2007; Jackson, 2009; Easterlin, 1995). Still, economic growth is regarded as an important agenda in city development (Sterman, 2012). Contrarily, many developing nations are striving to alleviate poverty and ensure adequate living standards for their population (Sterman, 2012). For this, economic growth, to some extent, is required (Jackson, 2009).

Open-ended economic growth has been considered crucial in achieving welfare and prosperity (Jackson, 2009). The idea of economic growth seems to be ingrained in the logic of how modern society operates. One contributing factor is a wide spread 'social logic' of materialistic consumerism, which has become the basis for participation in society (Jackson, 2011). This materialistic drift induces damage on the well-being of people as 'the endless cycle of work and spend' may cause stress, alienation and mental depression (Leonard and Barry, 2009, p. 91).

The present study investigates how cities in developed countries can ensure and improve living standards, while minimising environmental and social problems. It argues that cities need to strive for the redefined version of prosperity by Jackson (2009). The particular contribution of this study is the suggestion to incorporate the salutogenic approach into sustainable urban development, through which cities commit to providing opportunities to people to indulge a 'good' quality of life. Additionally, there is a missing link between urban sustainability, and human flourishing (Marcuse, 1998; Sen, 2013).

The focus is placed in developed countries as increasing body of literature suggests economic growth is neither necessary nor desirable when achieving important societal goals and ecological sustainability, especially in wealthier nations (Victor and Rosenbluth, 2007; Jackson, 2009; Kallis, 2011; Kallis et al., 2012; Schneider et al., 2010; van Griethuysen, 2010; van den Bergh, 2011; Stutz, 2010; Daniels, 2010; Gustave Speth, 2013).

For the analysis, this study adapted the capability index (Robeyns and van der Veen, 2007), the urban prosperity framework (UN-Habitat, 2013) and an analytical framework suggested by Lee

[1] A developed country is defined as "a country with a lot of industrial activity and where people generally have high incomes" (Developed Country, 2014)

et al. (2014) used for investigating growth and poverty.

Jackson (2009) argues that prosperity includes both fulfilling basic needs and enabling human flourishing. This thesis focuses on the latter, human needs beyond subsistence (Sen, 2013). For clarification, prosperity with emphasis on human flourishing is defined by combining the relevant components of the redefined prosperity (Jackson, 2009), and the capabilities approach (Robeyns and van der Veen, 2007).

Prosperity, in this thesis, is defined as city dweller's *opportunities* to 1.*(re)discover*, and to 2.*pursue* what they find meaningful/reasons to value, 3. within ethical and ecological limits. This approach aims to emancipate people with capabilities to live a fulfilling and meaningful life. The point is to give people chances to live a prosperous life by participating in society meaningfully, as Jackson (2009, p. 143) argues by borrowing Amartya Sen's idea of capabilities.

This approach can be effectively prompted at the city-level as cities entail capabilities to address various (un)sustainability issues (Nevens et al., 2013). However, this aspect, going beyond the fulfilment of basic needs for meaningful participation in society, is absent in the current sustainability debate, even though it is a crucial part of human society and human flourishing (Sen, 2013; Kates, 2011).

1.3 Aim and Research Questions

This thesis aims to concretise[2] Tim Jackson's theory, redefined prosperity focusing on human flourishing, can be achieved without economic growth (Jackson, 2009). The focus was placed at the city-level due to the increasing importance of cities, as mentioned in the introduction. To achieve this aim, this thesis investigated the following two questions:

1. What is driving economic growth?
2. What is the relationship between economic growth and urban prosperity?

The first question analyses the causes of growth whereas the second question investigates whether and how growth and prosperity relate.

[2]To add empirical evidence.

1.4 Hypothesis

Literature on prosperity, post-growth and sustainability suggests the relationship between economic growth and prosperity to be negative. This leads to the following hypothesis:

Economic growth does not significantly contribute to prosperity in developed countries, and cities therein.

1.5 Main Contribution/Significance

The *contribution* of this thesis is adding knowledge to the social components of urban sustainability in the context of developed countries, an issue relatively under-researched (Vallance et al., 2011). In addition, concretising the redefined prosperity concept adds to the argument for post-growth. A further contribution is the suggestion to incorporate the salutogenic approach (Antonovsky, 1996) into sustainable urban development. The salutogenic approach is primarily intended for medical sciences and suggests focusing on what causes health instead of what causes disease. This thesis argues that a similar idea can be applied to cities by focusing on what causes prosperity instead of what causes urban problems.

1.6 Disposition

This chapter introduced the problem, background, aims and contribution. The rest of the thesis is structured in the following way: introducing the concepts used (concepts), presentation of how the research was conducted (method), the central framework used for analysis (framework), presentation of results and analysis (results & analysis) followed by discussion where the answers for the research question are discussed; The thesis concludes by reflecting implications of the findings for cities, sustainability science, with a suggestion for further research.

2. Concepts

This chapter introduces the readers with essential concepts used in this thesis. These include sustainability, prosperity, growth, and the capabilities approach.

2.1 Sustainability

The concept of sustainability provides the basis for problematising growing cities and economic growth. It is also an important underlying concept of redefined prosperity (Jackson, 2009), which will be detailed in the next section. For the purpose of this thesis, social aspects of sustainability are considered crucial, as redefined prosperity advocates development based on human flourishing.

Definition

Sustainability is generally defined as below: "[M]eeting the needs of present and future generations while substantially reducing poverty and conserving the planet's life support systems" (Kates, 2011) Furthermore, sustainability consists of three aspects: economical, ecological and social; the balance among them determines a society's sustainability (Parris and Kates, 2003). However, this thesis argues that, in the context of cities, social aspects are most relevant since human dignity and freedom need to be considered as crucial parts of sustainability, as Sen (2013) elaborates. Along this line, Mori and Christodoulou (2012) argues that in an urban context, three pillars of sustainability – biophysical (environmental), social and economic– should be placed in a hierarchical order: meaning, "without a functioning life-support system, societies cannot thrive; without functioning social structures and institutions, economies cannot flourish." [p. 96] Moreover, while acknowledging the importance that ecological systems carry for human societies and their prosperity (Millennium Ecosysem Assessment, 2005), this thesis considers social aspects most important when considering prosperity focusing beyond mere subsistence and prosperity [1]. Prioritising social aspects is essential if people are considered capable of defining and pursing their own goals, that they have reasons to value, regardless of their biological needs (Sen, 2013). A general and vague definition of sustainability only considering basic needs[2] overlooks this aspect. The concept is deemed insufficient when it comes to providing arguments for human flourishing, and redefined prosperity is used in this thesis since it covers the fulfilment of basic needs and the pursuit of goals

[1] This will be elaborated in the succeeding sections.

[2] Physiological needs for survival such as shelter and food (Tay and Diener, 2011).

beyond basic needs as well (Sen, 2013).

Most Importantly: Social Sustainability

Social sustainability concerns in developed countries have largely been neglected: Vallance et al. (2011, p. 343), asserts that the literature on social sustainability has mainly focused on less-developed and developing countries. One explanation is that social sustainability is considered the same as social capital, social cohesion and social exclusion. Furthermore, social sustainability is based on the assumption that "necessary goods and services", so called lower basic needs, are already fulfilled. However, this assumption is severely contested: Vallance et al. (2011, p. 343) argue that urgent problems such as poverty, poor-health and inadequate housing still remain even in developed countries. They further argue that it is crucial to meet needs *everywhere*, regardless of how places are being labelled, developed or developing. Another reason for the negligence of social aspects is due to difficulties in operationalising the concept (Boström, 2012). Nevertheless, as Costantini and Monni (2008) argue, social factors such as human development and investment in human capital are crucial when it comes to achieving sustainability.

2.2 Prosperity Redefined

The term 'prosperous' (the state of being prosperous) here does not only refer to the dictionary definition: "successful in material terms; flourishing financially" (Prosperity, 2014). Rather, this thesis refers to the redefined version of the term by Jackson (2009, p. 45f) and UN-Habitat (2013).

For a prosperous life, the provision of basic material and immaterial needs is crucial. However, this thesis argues that there is more to it: prosperity is not only about fulfilling basic needs or combating urban problems. Instead, the essential aspects of prosperity are summarised in the following quote:

> *Prosperity consists in our ability to flourish as human beings – within the ecological limits of a finite planet. The challenge for our society is to create the conditions under which this is possible. It is the most urgent task of our times.* (Jackson, 2009, p. 16)

To achieve this, a shift away from materialistic, 'status-drive consumerism' is necessary, argues Jackson (2009). Druckman and Jackson (2010, p. 1803) adds to this point by emphasising the importance of providing capabilities for a less materialistic flourishing. – nutritional health, life expectancy, and participation in society (Jackson, 2009, p. 44). Jackson (2009) emphasises

the importance of meaningful participation in society through meaningful employment because employment provides opportunities for individuals to connect and interact with others.

Jackson's idea of prosperity is following the ideas of the capabilities approach based on Amartya Sen and Robeyns' works. The capabilities approach argues that prosperity is not about what people do or are – also called functionings. Rather, it is about what people actually can do or be, thus capabilities.

Furthermore, this thesis focuses on one of the five components of urban prosperity – quality of life (QoL) – as it is the most important aspect when aiming at city development that concerns humans as vital parts (UN-Habitat, 2013; Robeyns and van der Veen, 2007). The other four components encompass productivity, infrastructure, environmental sustainability, and equity (UN-Habitat, 2013). Furthermore, quality of life includes six key aspects: knowledge & intellectual development (education)[3], meaningful work (employment)[4], recreation, good health, safety/ security, and participation in decisions that affects people's lives (political rights). These aspects are derived from (UN-Habitat, 2013) and (Jackson, 2009). The first three key aspects (education, employment, recreation) are particularly relevant to this study since they relate to this thesis' definition of prosperity in the following way:

Prosperity is about city dwellers' *opportunities* 1. to *(re)discover* – via *knowledge and intellectual development (education)*, and 2. To *pursue* – via meaningful work and recreation – what they find meaningful/have reasons to value, 3. within ethical and ecological limits.

Note that the emphasis is on the opportunities. Opportunities to discover are perhaps best provided via different educational engagements. Pursuing what people consider meaningful is best achieved via *work* and/or *recreation*.

The Capabilities Approach

Prosperity, as defined in this thesis, has the capabilities approach as its basis. This approach explains why it is important to focus on the opportunities to prosper that people have. Capabilities are about real opportunities that people have in order to do and be what they value and want, with the freedom to choose to use those opportunities (Nussbaum, 2001; Jasek-Rysdahl, 2001; Robeyns and van der Veen, 2007). This idea can also be found in the redefined prosperity by Jackson (2009). The work of Robeyns and van der Veen (2007) is perhaps most relevant to the aim of this thesis: the authors acknowledge the capabilities approach theorised by Amartya

[3]From here on, it will be referred to as education for simplicity's sake

[4]The word employment will used in the remainder of this thesis

Sen, and later operationalised by Martha Nussbaum. However, both of these have yet to provide an updated and practically applicable approach. Robeyns and van der Veen (2007), therefore, contribute with guidelines for operationalising the capabilities approach by developing a capabilities index. The advantage of the capabilities approach is that it can be context sensitive and flexible while respecting the diversity of values and opinions.

Quality of Life

Quality of life is an important concept in operationalising prosperity since this study selects quality of life as the focus area of prosperity. This will be elaborated in the chapter about the framework. Here, the idea of quality of life framed with the capabilities approach is outlined.

Robeyns and van der Veen (2007, p. 59) lists 13 domains of quality of life for a capability index developed for the Netherlands: 1. physical health 2. mental health 3. knowledge and intellectual development 4. labour 5. care 6. social relations 7. recreation 8. shelter 9. living-environment 10. mobility 11. security 12. non-discrimination and respect for diversity 13. political participation. In discussing these domains, Robeyns and van der Veen (2007) emphasise opportunities and freedom of choice, meaning what exactly individuals choose to do is up to them. Robeyns and van der Veen (2007) also clarify that governments need to provide "fair shares of effective opportunities" for citizens to achieve a good life. More importantly, whether they have chances to do what they want to do is a core consideration. For instance, people talented in mathematics should be given effective opportunity to use their talent by studying. However, it is up to them to use the opportunities (Robeyns and van der Veen, 2007, p. 60). One important domain of quality of life, assert Robeyns and van der Veen (2007, p. 60), is the opportunity to perform *meaningful work* earning decent wages – this corresponds to labour in the list above. Work is an important part of social life and a means for subsistence (Robeyns and van der Veen, 2007; Atherton et al., 2011). Robeyns and van der Veen (2007, p. 60f) argue that governments can facilitate the capabilities for meaningful work with a number of activities e.g. remove social obstacles, incentivise citizens for develop knowledge and skills.

Work

As briefly mentioned in the section above, work[5] is an important component in quality of life – and in the redefined prosperity. Work is an important function in society and, as Jackson (2009) explains, work is a crucial part of prosperity. Employment does not only provide individuals with means to support their daily lives, but is also a mean to participate in society in meaningful ways.

[5]Work in this thesis is used interchangeably with employment and job, as these words are often interchanged in the literature.

This aspect of work – participation – is essential to prosperity. To emphasise the importance of work, the serious problem of unemployment needs to be discussed. A literature review on young adults' unemployment in Nordic countries found that unemployment increases an individual's psychological distress whereas becoming employed increases well-being (Reneflot and Evensen, 2014). This adds to the argument that work is important to people's quality of life. Furthermore, unemployed individuals have been discovered to suffer from lower psychological and physical well-being compared to those who were employed (McKee-Ryan et al., 2005).

The Working Hour Debate

Scholars suggest that leading economies need to shift away from constant materialism, consumerism and economic growth to combat environmental and social problems (Gustave Speth, 2013; Jackson, 2009). A reduction of working hours is suggested to contribute to a decrease in environmental damage that present human societies cause (Knight et al., 2013). Victor and Rosenbluth (2007) proposes that it is possible to achieve social sustainability – full-employment, reduced poverty, and people enjoying more recreation – with low or no economic growth.

Nø rgård (2013), argues that the current economic system, based on professionalism, needs to shift to a less labour-productive amateur economy to decrease ecological damage and increase life satisfaction and happiness. Reduced paid working hours and consumption lower environmental pressure, while improving the well-being of people. Knight et al. (2013) agrees with Nø rgård (2013) and concludes that longer working hours increase the national gross domestic production (GDP) and lead to higher resource consumption and carbon emissions. Consequently, Knight et al. (2013) suggests reducing working hours and argues that it is achievable in a socially sustainable manner.

Meaningful Work

Meaningful work is a crucial component of redefined prosperity (Jackson, 2009). Here, a short account of the concept is provided.

Work does not necessarily provide meaningfulness *per se*, but many find meaning through work, argues Sedgwick (2011), since work provides possibilities to participate in society, and to connect with others. The contribution of meaningful work to quality of life is significant as well: work is often a bridge between individuals and their society. Meaningfulness that comes from employment is based on individuals' possibilities to participate in a community in a meaningful way (Jackson, 2011). Besides participation in society, work enables individuals to create value for society (Sedgwick, 2011). What is then meant with the meaningfulness? According to Sedgwick (2011, p.

69), meaningfulness is about being appreciated, creating value, and contributing to society. This can lead to a sense of purpose and redemption. Furthermore, work can be a source of challenge and/or enjoyment, and it can reinforce social identities. However, work may not be meaningful for everyone at all times. Martin (2012) argues that balancing work and leisure is also important. In this case, leisure time can provide people to pursue what they find meaningful and have reasons to value, as Sen (2013) might formulate it.

2.3 The Salutogenic Approach for Cities?

The present thesis suggests considering 'value', i.e. what city-dwellers have reasons to value and pursue, to be an important part of their prosperity. In fact, shedding light on what makes people's lives 'prosperous', in their own terms, follows *salutogenesis* (Antonovsky, 1996) and *positive psychology* (Csikszentmihalyi and Csikszentmihalyi, 2006). As previously mentioned, *salutogenesis* focuses on what makes people healthy as opposed to *pathogenesis*, focusing on how to cure diseases. Both *salutogenesis* and *positive psychology* ask a similar question: what makes people healthy and happy? This thesis follows the same stance and focuses on what makes the lives of city dwellers *prosperous* – opportunities for education, meaningful work and recreation - instead of focusing only on what causes issues such as poverty or environmental degradation. This is not to depreciate the prevailing problems in cities such as poverty and inequality (Lee et al., 2014); rather, it is a suggestion to broaden the research focus, as well as to add prosperity to the portfolio of urban development practice.

2.4 Growth

Growth, or economic growth [6], is a crucial concept in this thesis. However, the concept has different meanings, hence the need for clarification. In short, this thesis uses growth synonymous to economic growth. Economic growth is defined as a long-term, sustained increase in real per capita income or production (Kuznets in Polèse, 2005). It is generally measured with GDP[7]. Historically, economic growth has been closely associated with prosperity (Jackson, 2009); however, as UN-Habitat (2013) argues, cities that merely focus on economic development can deteriorate in quality of life. Furthermore, Okun's Law dictates that economic growth, after a certain level, will destroy

[6] For the GDP growth rate at national-level, an average of 10 years for each country was calculated by the author based on data from OECD.

[7] "The total value of goods produced and services provided in a country during one year" (GDP, 2014)

more employment opportunities than it creates (Demailly et al., 2013).

Problems with Growth

Jackson (2009)and other scholars regard the unreflected pursuits of economic growth as a problem. Kubiszewski et al. (2013) has, for instance, shown that the global GDP has been increasing since 1950 while economic welfare has been decreasing. The use of GDP as a measure for progress is also criticised as it will only define progress in terms of production and growth in an economy (Stiglitz et al., 2010). It does not take into account quality of life (Kubiszewski et al., 2013). However, Stiglitz et al. (2010, p. 12) convincingly explains that the problem is not GDP *per se*, but the hegemonic status that GDP has. It has been used longer than other indicators, for instance the human development index (Kubiszewski et al., 2013), and prosperity indices (UN-Habitat, 2013; Legatum Institute, 2013). There are already established institutions and practices for measuring the GDP. Additionally, the GDP arguably has three major problems as a measure of welfare: it does not measure activities that cannot be monetised, it does not include the distribution of the wealth, and it does not distinguish between activities that harm or benefit welfare (Kubiszewski et al., 2013, p. 57).

Alternatives to Growth

Various literature suggests that there are different types of economic growth. In the realm of sustainability, economic growth is generally regarded as undesirable, especially for richer nations, due to its negative impact on environmental and social sustainability (Victor and Rosenbluth, 2007; Easterlin, 1995). Besides, in richer nations, "the greatest socioeconomic improvements" – reduced poverty, better wages, and environmental legislation – were already established around 1970 (Dowd, 2000, P.201f).

It is important to distinguish different types of growth. Rhetorically argued, the types of growth that damage quality of life, humanity and nature is undesirable, but the types that help humans to flourish and occur within ecological limits can be desirable. This also depends on extent to which the cities or nations have fulfilled the basic needs of their population. In wealthier nations, growth or wealth accumulation after a certain point does not add to human welfare, known as the Easterlin Paradox (Helliwell et al., 2013).

A growing body of literature suggests that societies that shifted away from economic growth lock-in, focusing on non-materialistic prosperity/flourishing instead, are sustainable and happy (Foxon, 2011). Research on degrowth shows that downsizing an economy may increase well-being (Lorek and Fuchs, 2013). Schneider et al. (2010, p. 511) has reviewed studies in sustainable degrowth and

concludes "that economic growth is not sustainable and that human progress without economic growth is possible."

3. Method - How and why?

3.1 Structure

The aim of the thesis is to concretise the theory that prosperity can be achieved without economic growth. This chapter describes the method applied to this study. The steps include framework development, data collection techniques, and analytical methods.

The research was conducted in the following way:

1. Create frameworks to operationalise the concepts
2. Review existing studies
3. Statistical data analysis of he selected 13 cities, and two cities for detailed analysis

The structure of this method is adapted from (Lee et al., 2014)[1] since the study shares a similar underlying approach with this thesis. Below, the method for this study is explained in detail.

3.2 1. Framework Creation:

A framework was needed to operationalise prosperity as Jackson (2009) does not provide concrete suggestions on how to measure prosperity. After the framework was constructed variables were selected and defined. This operationalisation is used as it can provide validity and reliable data, especially in research that lean towards social science (Osborne, 2010).

To create a framework, (Jackson, 2009)'s definition of prosperity was operationalised by distilling variables. Furthermore, variables from the capabilities index (Robeyns and van der Veen, 2007) and the urban prosperity framework by UN-Habitat (2013) were utilised to select variables that match the focus of this study: Prosperity is about city dweller's *opportunities* 1. to *(re)discover*, and 2. to *pursue* what they find meaningful/reasons to value, 3. within ethical and ecological limits.

As a result of this operationalisation, three variables are chosen: education, work and recreation. A subset of variables will earn a comprehensive picture of each variable. Since the data employed by this thesis is based on existing data in publicly available databases, the chosen variables were largely subjected to their availability. The framework is detailed in the subsequent chapter. The

[1] The authors examine the relationship between economic growth and poverty in the cities in the UK.

variables for growth were also determined with the help of literature as they are required to examine the relationship between growth and prosperity. Specifically, GDP is determined as the indicator for growth due to data availability, as well as literature mentioning GDP as the measure for growth (Mikkelson, 2013; Kallis et al., 2012).

3.3 2. Review of Existing Studies

A short review on existing studies was conducted to gain material for comparing the results of the analysis. The review was conducted to cover both research questions[2].

Data collection and screening

To collect existing evidence, peer-reviewed literature – either original articles or review – was searched on the Scopus database covering the five years period between 2009 and 2013. The year 2014 was excluded as it is still ongoing and search results may change if the same search will be conducted in the future. To gain reproducible results, search strings were constructed for each review. After searching for literature at the database, a screening was conducted by examining titles and abstracts to determine whether or not the literature mentions or examines the relationship between growth and a selected variables. This method is conducted by applying the modified method suggested by Randelin et al. (2013). The search strings can be found in the appendices.

3.4 3. Data Analysis

Statistical analysis is conducted to examine the relationship between growth[3] and prosperity variables – education, employment and recreation. The time series of the variables is plotted to examine trends. Correlation tests are conducted between growth and prosperity variables (detailed below). For statistical data, the top 13 cities (see Appendix) of the City Prosperity Index of UN-Habitat (2013) are investigated, the index including production (economic growth) as a crucial part. Since this thesis questions the correlation between prosperity and economic growth, these 13 cities are chosen to re-examine prosperity from a perspective that does not emphasise economic

[2] 1. What is driving economic growth? 2. What is the relationship between economic growth and urban prosperity?

[3] For the GDP growth rate at national-level, an average of 10 years for each country was calculated by the author based on data from OECD.

growth. To examine the relationship between growth and prosperity in more detail, two cities from those 13 cities are selected: Copenhagen and Stockholm. The selection of these two cities is based on the first analysis of the 13 cities that showed significant differences in their respective growth rates despite the similarity in size. Due to the lack of data on the city-level, national level data was used as supporting evidence. Nation-level data is also admissible due to the fact that cities, especially large metropolitan cities, normally capitals, are the driving forces of their countries; therefore, findings from the national-level can be applied to cities to a large extent. Besides, the cities that are selected for this study are capitals.

The main database used for accessing data was OECD.stats[4]. Eurostat[5], EU's database for statistics, was also used. To complete the analysis, the statistical software RStudio Version 0.98.507 was used on Mac OS 10.6.8.

Correlation test

Pearson's product-moment was used to examine the correlations between growth and the prosperity variables. It is a statistical test to examine relationships between two variables by measuring "strength and direction of the relationship" (Matthews and Ross, 2010, p. 475). The value of correlation is between −1 to 1. 1 symbolises a perfect positive correlation, and −1 represents a perfect negative correlation (Moses and Knutsen, 2007). The calculation was performed using a software package −*cor.test*− installed in Rstudio.

3.5 Limitations

In general, systematic database search has two major limitations, as experienced during the search.

- Accuracy: whether the search strings capture the desired results remains questionable. Although the search strings were tested and modified for yielding the best results, there might be better ways of formulating search keys.
- Technical limitations of databases: the Scopus database used for this review does not provide full-text search. This might omit some relevant results as titles and abstracts may not always provide all relevant information in keywords within the knowledge of the researcher.

[4] http://stats.oecd.org/

[5] http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/

4. Framework

To enable analysis, a framework for the chosen aspects of prosperity (education, employment and recreation) was created. This constructs a basis for providing evidence to the theory of Jackson (2009) – prosperity without growth. These three chosen aspects are also based on the focus on quality of life – the most relevant aspect among the components of urban prosperity suggested by UN-Habitat (2013) and discussed in the concept chapter above.

Jackson (2009) is vague on operationalising prosperity. He briefly mentions that the importance of measuring prosperity in a segment (Jackson, 2009, p. 181f) by referring to a Dutch capability index (Robeyns and van der Veen, 2007). Nevertheless, he provides no concrete indicator.

In this section, a detailed description of the framework created for this study is provided.

4.1 What Can be Measured Can be Managed?

The aim of the thesis was to concretise Jackson's prosperity without growth. For this the research question asked how growth and prosperity are related. In order to answer the question, a framework that conceptualise the question was needed.

For this, the relevant domains of quality of life from the selected literature were chosen (Jackson, 2009; Robeyns and van der Veen, 2007; UN-Habitat, 2013) (See Appendix for the full list of indicators). It was done by extracting the domains and indicators related to quality of life, which was determined to be the relevant aspect of urban prosperity. Furthermore, to fit the focus of this study (dealing with prosperity beyond basic needs), the domains were narrowed down and merged to finalise the indicators employed for the data collection and analysis. The resulting final domains are:

* education
* employment
* recreation

Those three indicators also resonates with UN-Habitat (2013) mentioning the importance of quality of life in urban prosperity as urbanites enjoying good quality of life such as, "assurances to live and work freely, good quality of education, adequate housing with basic services, and meaningful employment with decent income", can also effectively promote the remaining components of the urban prosperity – equity, infrastructure, environmental sustainability, and productivity.

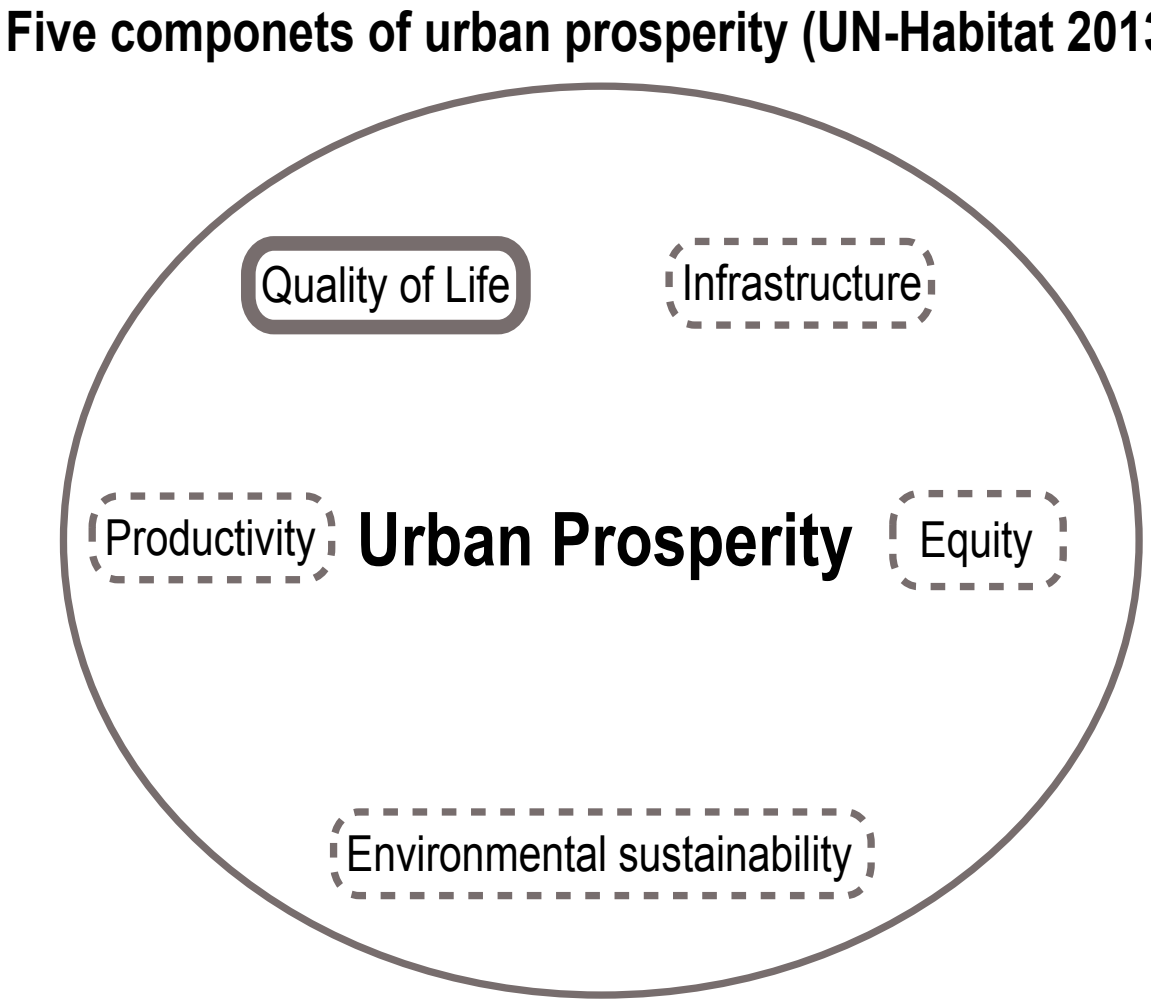

Figure 4.1 – Five components of Urban Prosperity

4.2 Everything Combined – Indicators: Capabilities and Prosperity

This section provides a merged set of indicators for selected aspects of quality of life. Relevant aspects of indicators presented above are merged and selected. The three most relevant indicators are opportunities for meaningful employment, education, and recreation. As emphasised above by borrowing words of (Jackson, 2009), *possibilities* to live a flourishing life are the focus of this thesis.

Below is the set of the indicators that this thesis uses to measure the provision of opportunities for a prosperous city life. It was constructed by first asking the question: what are the areas that overlap between the indicators presented above? After discerning overlapping indicators, they were merged. Second, irrelevant indicators were taken away to serve the aim of this thesis.

4.3 Focus on Quality of Life

UN-Habitat (2013) provides a comprehensive framework for measuring prosperity. This framework constitutes the base of urban prosperity for this thesis as well. However, the focus of this thesis is on the aspects of prosperity beyond basic needs, and immaterial aspects. To recap the main focus of the thesis: Prosperous cities provide opportunities to (re)discover and pursue (do) what people find meaningful/reasons to value. This leaves us with one aspect, quality of life. For measuring quality of life, UN-Habitat (2013) suggests to measure the following:

1. Educational facilities
2. Job creation/reducing unemployment
3. Availability and quality of health services
4. Social services (education, health, recreation, safety and security)
5. Housing conditions, air pollution, noise, public transport, infrastructure, safety [p. 72]

Applying the thesis' main focus – non-materialistic and beyond basic needs – the list can further be narrow down to three aspects: 1. Educational facilities 2. Job creation/reduce unemployment 3. Social services including education and recreation.

Note: health, and safety and security are not being considered as they are out of this thesis' focus area. The selected aspects of quality of life are illustrated in the figure above. Emphasised letters and frames show the chosen aspects.

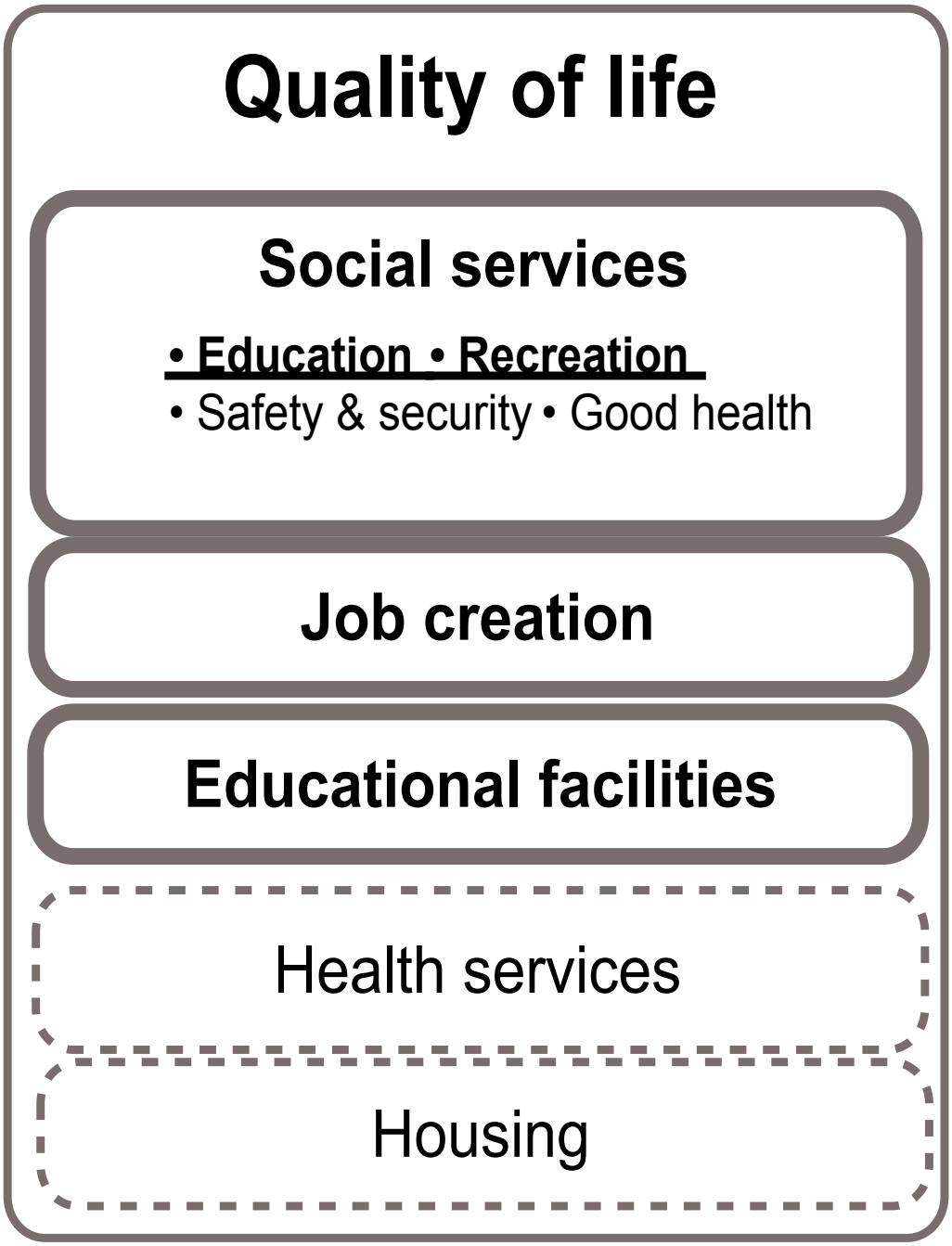

Figure 4.2 – Quality of life and its components

Of these aspects above, social services is the most relevant aspect amongst the components of quality of life. The reason is that this thesis defines prosperity in terms human capabilities in the centre.

Below, each of the chosen domain is described.

1. Knowledge and intellectual development or education

   This domain provides the basis for meaningful participation in society. Skills acquired can lead to employment, and, potentially, meaningfulness. This indicator can be represented in educational opportunities. Although formal education is not the only aspect leading to intellectual development, it was chosen as an indicator due to data availability. For simplicity, 'education' will be used to refer to this domain.

2. Meaningful work or employment

   This domain is crucial for quality of life, "since a person's functioning in this domain is related to important decisions to allocate resources to capabilities in other domains" (Robeyns and van der Veen, 2007, p. 71). Consequently, the question will be how cities redistribute time and money. Furthermore, meaningful work is an important aspect of prosperity, as claims (Jackson, 2009). Meaningful work may be considered the best case scenario. Nevertheless, work or employment is essential for social participation, self-realisation and subsistence (Overell, 2008; Kelly, 2000). Therefore, various indicators that show opportunities for employment will be considered. Employment opportunities are the first step towards meaningful work. This thesis will refer to employment opportunities instead of meaningful work due to the difficulty in obtaining data concerning meaningful work. As for the analysis, possible connections between the collected data concerning employment and meaningful work will be established[1]. Using data on employment is relevant since there need to be opportunities for employment before meaningfulness can even be considered. Therefore, ensuring employment opportunities is the first step towards meaningful work. 'Employment' will be used to refer to this domain in the remainder of this thesis.

3. Recreation (or time for doing what individuals find fulfilment in)

   Opportunities for recreation as a domain was selected since the balance between work and non-work activities is crucial for quality of life (Martin, 2012). In some cases, individuals might feel highly satisfied with their work and the border between work and recreation might be blurry. The time devoted to non-work activities may complement opportunities to participate in society in meaningful ways.

[1] Meaningful work is defined as work leading to both vocation and self-realisation Atherton et al. (2011, p. 69)

To relate to the selected aspects of prosperity applied to this thesis, each of the chosen domains, listed above is demonstrated below.

1. to (re)discover corresponds to education: knowledge & intellectual development, and
2. to pursue corresponds to employment and recreation.

Through education, people have the possibility to find out what they like to do/consider meaningful/fulfilling. Through work and/or recreation, people can pursue/do what they consider fulfilling. Education and employment are also important for other reasons since education leads to employment as individuals acquire skills and knowledge. Employment with decent compensation enables individuals to sustain their livelihood and to pursue their interests. Through work, individuals participate in society; this creates social relations and strengthens trust as well as gives a sense of belonging (Jackson, 2009). Recreation is essentially seen as having the time and possibilities to engage in non-employment related activities. If work alone does not bring fulfilment to individuals, recreational time provides opportunities for individuals to pursue their interests. However, as Jackson and Victor (2013) argues, the best case would be individuals engaging in meaningful employment.

Variables for Measuring Prosperity

Outlined below are the variables that will be employed by the analysis. The selection of the variables is based on the framework constructed above with the theoretical justification provided by (Robeyns and van der Veen, 2007), as elucidated above.

Capabilities are about factors a city can control. Robeyns and van der Veen (2007) suggest a list of resource inputs a government can make for capabilities. To measure opportunities, inputs in terms of time and money are suggested. Robeyns and van der Veen (2007) mention that there are also factors that are beyond the control of authorities, even though these factors might affect individuals' capabilities. Examples of such factors are innate talents, upbringing and family situations (Robeyns and van der Veen, 2007). Nevertheless, governments do have possibilities to influence those factors. Time input, in this thesis, will be disregarded as there is too little data available. Money inputs, however, can tell about opportunities as Robeyns and van der Veen (2007, p. 71) argue: "[a] society which heavily subsidises education, and in which adult education programs are well developed in particular, will strongly support people to generate a decent income" Ultimately, the variables that will be counted as 'opportunities' for the chosen three aspects of quality of life/prosperity will be connected to money input – in education, employment and recreation. In most cases, this means government spending on each domain.

Below is a list of variables to measure relevant factors a government may influence as well as factors currently beyond their control, as suggested by Robeyns and van der Veen (2007).

Education: media, time, money. Beyond control: innate intellectual talents, upbringing.

Employment/labour: time, labour market policies, social capital. Robeyns and van der Veen (2007), labelled as labour, not meaningful work. Beyond control: knowledge and skills, innate talents, social class in which people are born, social network.

Recreation: time, money, employment conditions, sport and cultural policies. Beyond control: population density

Growth and prosperity

Now that the relevant variables are determined, the relationship between growth and prosperity can be illustrated as following.

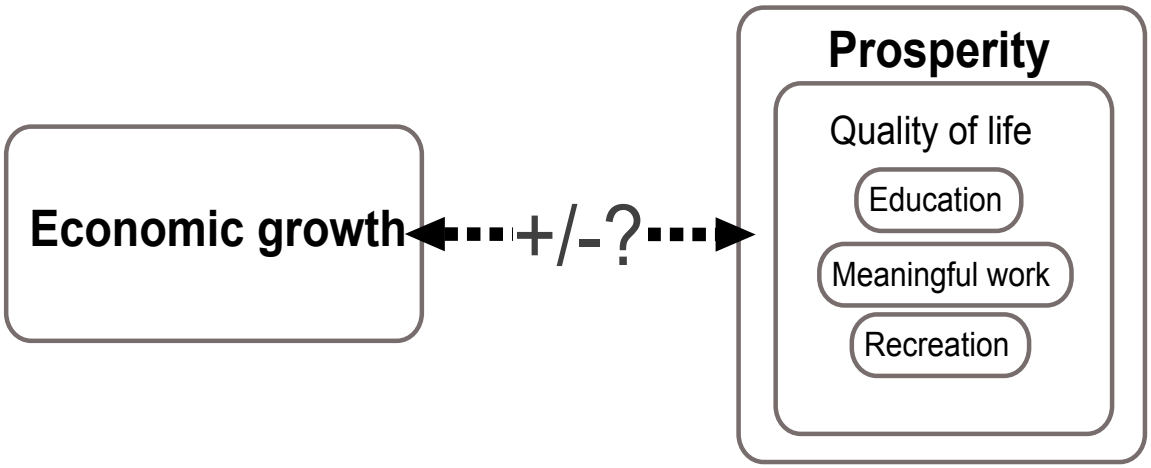

Figure 4.3 – Growth and Prosperity

Corresponding to the second research question that asks how growth relates to prosperity, this illustration shows a possible link between those two concepts. Selected aspects of prosperity – education, employment and recreation – are elucidated in the illustration. Note that it is about opportunities for achieving these three aspects of prosperity. There are two remarks regarding the links: first, a link may be positive or negative; second, the causal direction of the link may vary, is it growth that affect prosperity or the other way around, or is the effect mutual?

The analysis in the following chapter will be based on the model in the illustration.

Limitations concerning operationalisation

This thesis has deployed categorisations of important inputs that a city can make as Robeyns and van der Veen (2007) did for the Netherlands, by focusing on what the city may control, and what is beyond a city's capacity. This way, a clear presentation of a pragmatic approach was made possible. Robeyns and van der Veen (2007) imply that any list of prosperity measures needs to be consulted with an open dialogue before forming the basis of a research. Therefore, the authors provided the capability index on a rather general level. Sen (2009) would also insist that every society and city needs to choose their own list of indicators that is suitable to their local context. Clearly, this argument works against the operationalisation of urban prosperity in this thesis: the construction of a list that defines and chooses certain aspects of quality of life over others. However, this criticism is more relevant when the capability index is used to actually affect people's lives and environment instead of serving academic purposes. The same criticism can be directed to UN-Habitat (2013).

Summary

A framework conceptualising was the version of prosperity for this thesis was developed for the analysis of the data. The framework shows the relation between growth and prosperity. Additionally, three variables were chosen as proxy indicators for prosperity. These were education, employment, and recreation.

5. Result & Analysis

5.1 Review of the existing studies

This section will provide an overview of previously conducted research connected to the research questions. As for the first question, concerned with the drivers of economic growth, existing studies would maintain that both socioeconomic and systemic (path-dependent) factors drive economic growth. Regarding the second question, existing studies claim that economic growth does not contribute significantly to prosperity whilst one aspect, education, may promote local economic growth.

Drivers of Economic Growth

This section provides a preliminary answer to the first research question: What drives economic growth? The results revealed two large categories of drivers of growth: socioeconomic factors and systemic factors/reasons.

Socioeconomic Factors

Table 5.1 – Drivers of growth - Socioeconomic

Authors	Driving force	Context
(Benard et al., 2013)	Well-functioning business sectors	Developing countries
(Blumenthal et al., 2009)	Econ. structure, agglomeration, human capital, right-to-work law	US
(Brown-Luthango, 2011)	Agglomeration in cities	South Africa
(Cabrita et al., 2013)	Innovation, creativity and networks	–
(Çetindamar and Günsel, 2012)	Creative and innovative potential of cities	Global

The studies listed above indicate that economies are mainly driven by enterprise and innovation. More importantly, many articles agreed that cities themselves are driving forces as they provide structures that lead to growth. Related to this point, connectivity and concentration of educated people are also listed as drivers.

As the search did not yield any particularly satisfying number of results, additional studies were reviewed. These are (Lee et al., 2014; Bettencourt and West, 2010; Demailly et al., 2013; Dowd,

2000; Bartolini and Bonatti, 2002; van Griethuysen, 2010). As the results reveal above, the driving forces for growth are economic. To gain a different perspective, the studies chosen are generally critical to growth. Lee et al. (2014, p. 22–27) have identified factors that drive economic growth in cities in the UK

- Enterprise and innovation
- Human capital
- Physical environment
- Leadership and governance

These factors are similar to the ones from the reviewed literature above. However, they add a new element of physical environment, leadership and governance.

Systemic Factors/Reasons

Bettencourt and West (2010, P. 913) explains that limitless growth is actually the 'primary assumption' in 'modern cities' and economies. Related to this point is that political discourse often considers economic growth to be the solution to economic and social problems (Demailly et al., 2013). Thus, political forces are also among the drivers. Furthermore, Demailly et al. (2013) points out that economic growth is a mean to various ends e.g. social progress. However, now, economic growth is regarded as an end in itself in economic policy (Dowd, 2000, p. 200). From this point of view, growth is a self-evident goal of society. Through mathematical modelling Bartolini and Bonatti (2002, p. 2) argues that environmental and social degradation is an engine of economic growth. This idea was inspired by the theories of Polanyi and Hirsch that "economic development is both the effect and the cause of the erosion of traditional institutions and cultures, whose decline releases the energy that feeds the growth process with its destructive power on such institutions". Similarly, van Griethuysen (2010) explains that economic growth is driven by the structure of the current property-based economy which causes path dependency and institutional lock-in. Therefore, the growth will continue automatically.

In summary, the drivers identified from the review can be categorised into two large categories: socioeconomic factors and systemic factors. Socioeconomic factors are mentioned in all of the systematically reviewed papers plus Lee et al. (2014). These are usually 'measurable' variables. Systemic factors, on the other hand, are derived more from theoretical backgrounds, and system-critical perspectives. These systemic factors are represented in the second half of the literature review above. In essence, systemic factors are ingrained in the current economic system.

The following three subsections cover the review of studies that indicate relationships between growth and prosperity. The sections are structured according to the three selected aspects of prosperity – education, employment and growth. The results of each section will be summarised in a table, followed by an explanation.

Growth and Education

Table 5.2 – Economic growth and educational opportunity

Author	Relationship		Context
	Direction	Type	
Burdick-Will et al. (2013)	Charter schools -> socioeconomic development	Positive	Chicago
Bartlett (2007)	Schooling opportunity -> economic growth	Positive	Brazil

Both studies imply a positive relation between educational opportunities and growth. In this case, schooling opportunities are regarded to foster economic growth.

Growth and Employment

Table 5.3 – Economic growth and employment opportunities

Author	Relationship		Context
	Direction	Type	
Brown (2010)	Growth -> employment (the poor)	Negative	Global
Cao et al. (2009)	Growth -> employment	Negative	China
Sands (2010)	industrial jobs -> post-industrial jobs	various	Canada

Brown (2010) examined the impact of the 2008 global financial crisis on the working poor of the world. The author argues against the general perception that globalisation and economic growth are effective tools for poverty reduction. Furthermore, it is also implied that growth reduces employment opportunities for the poor.

Cao et al. (2009) maintain that growing China is experiencing a widening gap between rich and poor. Due to this inequality, the authors argue that employment opportunities will not increase with economic growth.

Sands (2010) investigates the development of three Canadian cities, exploring how the job market and opportunities have changed. The findings show that path dependency plays a significant role in how the structure of jobs changes. In some communities, new types of post-industrial

jobs in the service and creative sector, so called New Economy jobs, were rising, while others were keeping manufacturing jobs. It was also found that the loss of manufacturing jobs was offset by an increase of New Economy jobs. This also means that people with skills suitable for New Economy jobs have gained increased employment opportunities while those working in manufacturing increasingly lost their jobs. This article did not indicate any driving factor of economic growth other than increases in employment; however, it provided an insight on path-dependency and context-dependent development.

Overall, the literature covered in this review session implies a negative relationship between growth and employment opportunities given that the concept of growth does not take wealth distribution into consideration. This view is supported by those who are critical of growth (See Okun's Law in Demailly et al., 2013), as introduced in the section above Growth (section 2.4). Another insight gained from reviewing the studies was that context – time and place – plays a key role in how employment changes.

Growth and Recreation

No relevant results were obtained despite the extended search criteria from a five year range to the past 40 years. In total, four paper meeting the search criteria were found for the past 40 years. However, none of them investigated the relationship between growth and recreation.

Economic Growth and Quality of Life

The database search for existing evidence of a relationship between economic growth and quality of life yielded four relevant articles. Provided below is the summary of the results.

Table 5.4 – Economic growth and quality of life

Author	Relationship		Context
	Direction	Type	
Longlands (2013)	Growth -> QOL	None	Global
Arvesen et al. (2010)	Growth -> QOL	Negative	China
Chua et al. (2009)	Growth -> QOL	None	Hong Kong

Longlands (2013) examined the relationship between economic growth and planning in two local UK authorities. The findings indicate that economic growth has become a dominant objective for forming local policies. This focus on economic growth, in turn, is argued to not to increase quality of life.

Arvesen et al. (2010) studied the household contribution of pollution in Beijing. The primary object of the study was not to measure the relationship between growth and quality of life *per se*. However, the study mentions that the past few decades of economic development have significantly contributed improving quality of life in China. As the economic development continues, though, the rising pollution levels deteriorate quality of life and environmental sustainability. Although the implied relationship is negative, the study indicates that the chosen timeframe can affect the relation.

Chua et al. (2009) has assessed the relationship between economic growth and the Social Development Index (SDI) in Hong Kong. The authors mention that SDI can be used to measure quality of life. Comparable to the case of China, Hong Kong has also experienced a rapid expansion of its economy during the past few decades. However, the authors conclude that this economic growth did not improve social conditions and quality of life in Hong Kong.

Summary

This section has presented a review of existing studies. In general economic growth is not regarded to contribute to any of the three domains of prosperity.

5.2 Relationship: Growth and Prosperity

This section shows the data analysis for the selected cities. Overall, the results indicate that economic growth and prosperity have a negative correlation.

General Trends of Growth

This section briefly provides an outlook of the world's trends in economic growth, education, and employment. No data on recreation was available.

The global GDP has more than doubled (times 2.49) since 1960.

Annual GDP growth rates have been declining since 1960, with big fluctuations. The average overall growth rate is 3.59%.

Employment

Globally, labour force participation shows a trend of decline. However, compared to the GDP data, the data period is shorter as this was all the data available from the source (The World Bank) The labour force participation rate has been declining between 1990 and 2010. It has dropped by 2.88% (The World Bank, 2014)

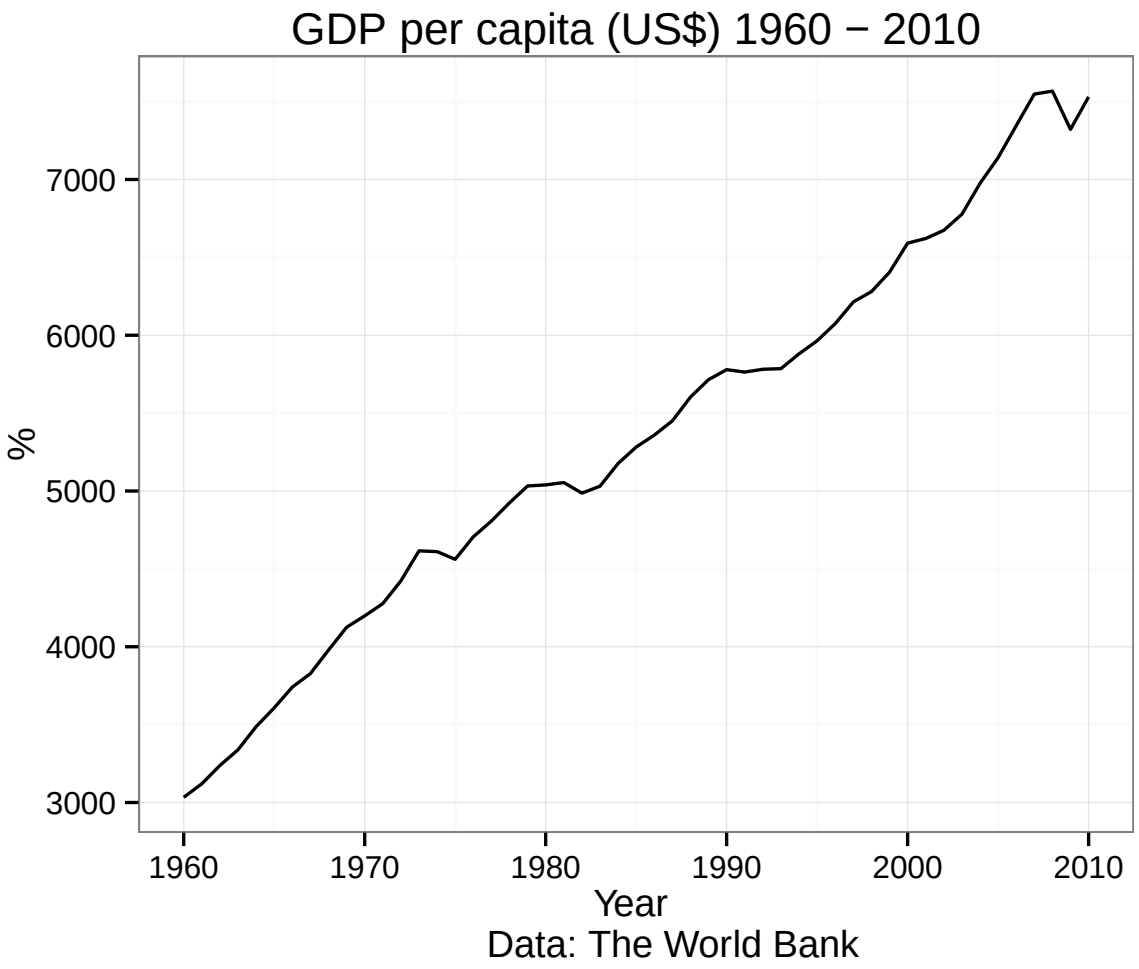

Figure 5.1 – GDP per capita: World

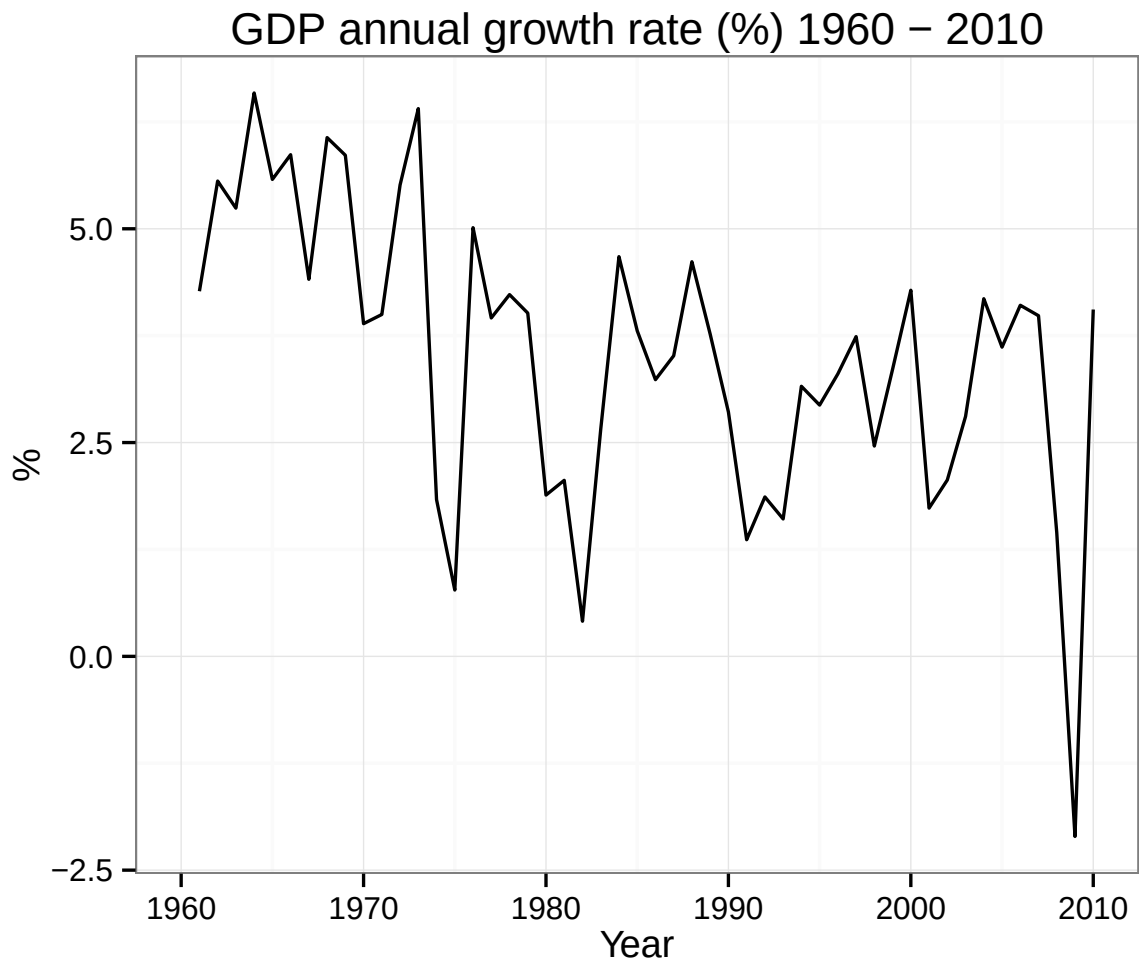

Figure 5.2 – GDP annual growth rate: World

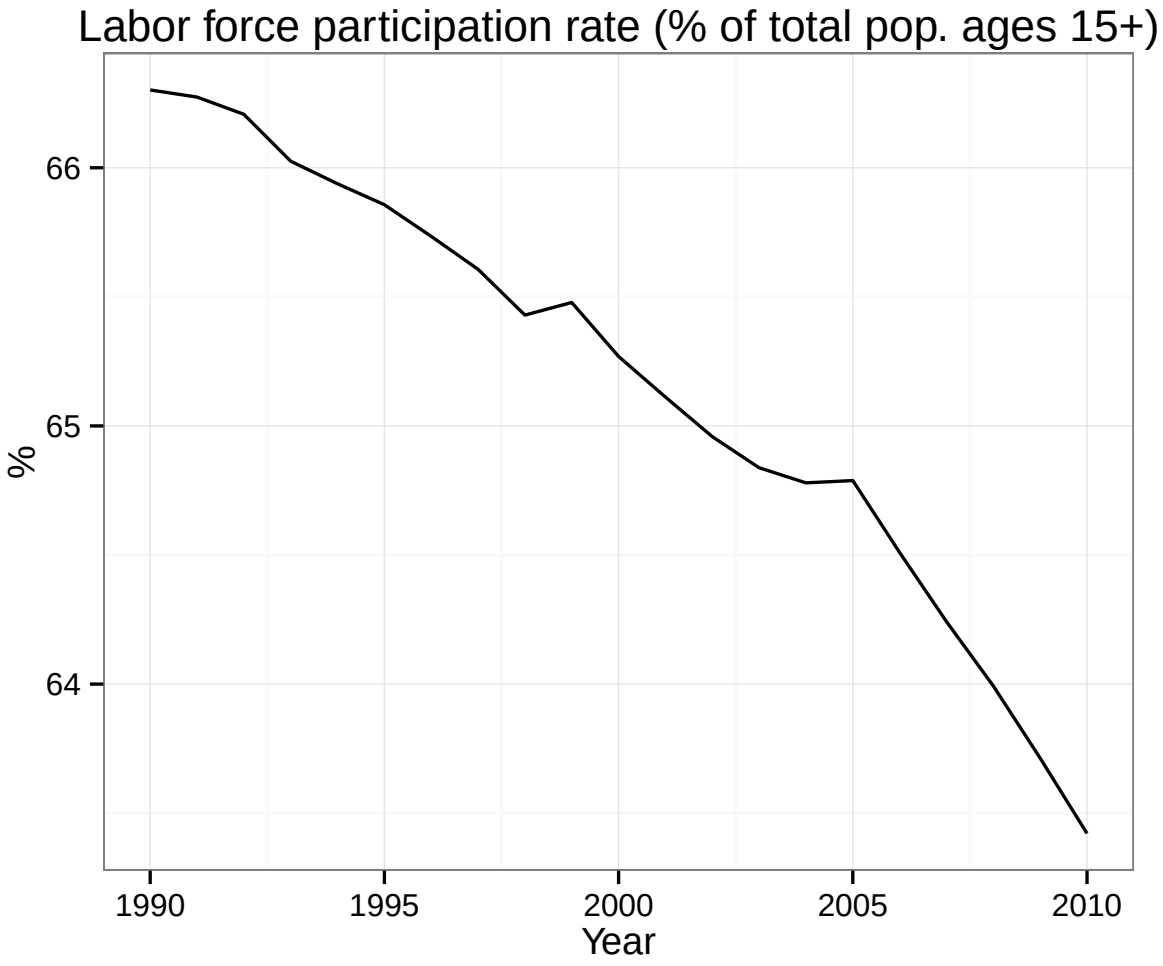

Figure 5.3 – Labor force participation: World

Education

Spending on education was chosen as it indicates opportunities for education, as discussed earlier. Globally, public spending on education has been rising (% of GDP). However, data was only available between 1990 and 2010 and the rise is rather modest with only 0.74% (The World Bank, 2014).

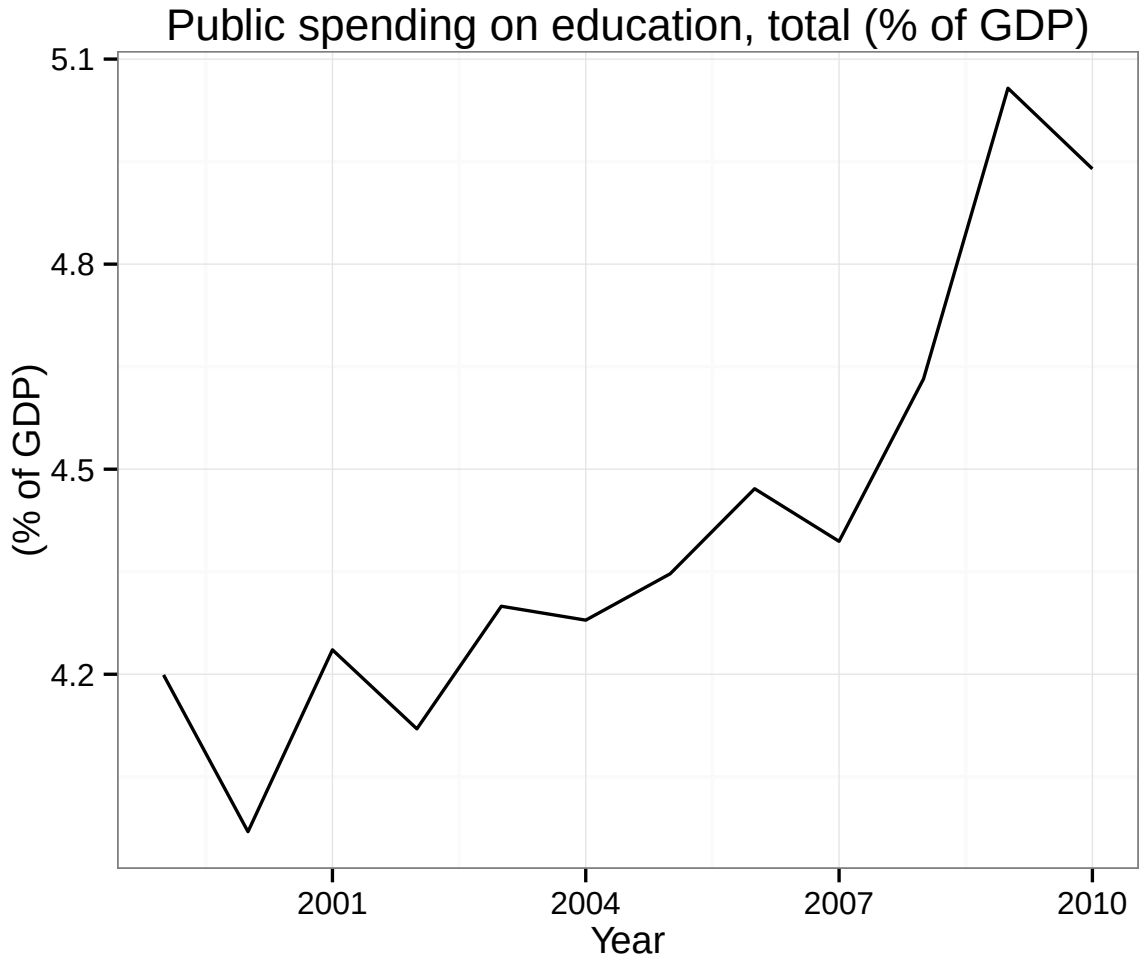

Figure 5.4 – Public spending: Education

Recreation

Data regarding recreation at a global scale was not available.

Use of National-level Data

As discussed in the introduction, cities play an important role in the economy and human life (UN-Habitat, 2013) since cities have a growing share of a nation's economy and social activities. From this section onwards, the focus will move to the selected 13 cities as explained in the method.

This section starts by providing a brief overview over the selected cities in terms of their economic significance.

An examination of the available data shows that the economies of the selected cities account for a large part of their respective national economies, as shown in the table below, confirming the results found in the review section above. The values presented are the calculated average of the 13 cities and prove the significance of the city's economy in their national context. Most of the indicators show that the cities account for about one fourth of their national economy. Given that these are single cities, this justifies the use of national-level data where city-level data was not available in the following sections. The use of national-level data was necessary to complement the lack of data.

Table 5.5 – Significance of cities to nations

Indicator	Value (%)
GDP share	29.05
Population share	23.05
Labour force share	29.05
Employment share	23.82
Patent application share	30.66
Data source: OECD (2014)	

13 Cities

This section shows the results of the investigated relationships between economic growth and the components of redefined prosperity, as defined in the theory section. This chapter also provides an analysis regarding the second and central research question: What is the relationship between economic growth and prosperity at a city-level? Overall, the results indicate that economic growth and the prosperity of cities have a negative correlation.

The results are largely organised into two sections: 1. general trends and tendencies within the 13 selected cities, 2. analysis of the selected two cities – Stockholm and Copenhagen. Each section has subsections categorised into growth, and the chosen aspects of prosperity – education, employment and recreation, where correlations are examined.

In the sections where correlations are examined, the results are categorised into positive, negative or no correlation. Furthermore, the results are listed in accordance with the strength of their correlation. The lists begin with the one that have the strongest correlation.

General Trends of Growth

GDP per cap growth cities and GDP growth data are presented below. Overall, all cities show similarly low GDP per capita growth rates. Toronto even experienced a negative GDP per capita growth. As for GDP growth, there is more variety.

Table 5.6 – GDP/cap growth rate. 2000 - 2010

City	Growth rate (%)
Vienna	0.496
Toronto	–0.567
Zürich	0.444
Copenhagen	1.524
Helsinki	1.046
Paris	1.460
Dublin	0.469
Tokyo	0.748
Amsterdam	1.942
Oslo	1.137
Stockholm	1.314

Source: OECD (2014)

Compared to the global average growth per capita rate of 3.59%, the rates of these cities are lower, with the exception of Paris.

Opportunities

Among the available data at OECD, the relevant variables regarding opportunities for education is education spending, as is show the active government input for education. In explaining their choice of variables for sustainable quality of life, Robeyns and van der Veen (2007) expound that resource inputs by governments, in this case money, is both quantifiable and controllable. However, spending alone does not reveal changes in real opportunities that individuals have when it comes to accessing education since other variables may affect opportunities. As an attempt to control this effect, other variables that affect the outcome were also used as to complement the validity of the analysis. The same applies for the remaining variables – employment and recreation – in the following sections.

Growth and Education

Table 5.7 – GDP growth rate: 2000 - 2010

City	Growth rate (%)
Vienna	1.496
Toronto	1.242
Zürich	0.870
Copenhagen	2.243
Helsinki	1.736
Paris	3.357
Dublin	1.123
Tokyo	1.665
Amsterdam	2.623
Oslo	2.328
Stockholm	1.457

Source: OECD (2014)

Here, the results of the correlation tests are presented – indicating that growth and education has weak but negative correlation. Since the data at the city-level was largely missing from the database of OECD (2014), analysis was conducted using country-level data for this section.

Four variables are tested against economic growth – educational attainment, youth prospect of educational attainment, student skills, and years spent in educational facilities.

In general, the correlation between growth and education is very weak. All the correlation test values are below 0.15, besides the spending that shows negative 0.2. Nevertheless, these values are so low that it is not evident that growth and education have any significant relationship (Matthews and Ross, 2010). Additionally, all p-values are higher than 0.05 which means that the sample size needs to be bigger in order to produce statistically significant results. Receiving this result, a test sampling with a bigger sample (30+ countries instead of the current 13) was tested; however, the p-values still remained much higher than 0.05. Of this reason, the sample remains the same.

The table below shows the results of the correlation tests between GDP growth rate and five indicators for education. In general, the correlation is low with 0.2 as the highest value and 1 as the highest correlation value (Matthews and Ross, 2010). There are more results with negative correlation. This indicates that growth have a counter effect on education.

The most relevant indicator is spending, as explained in the chapters above, as it indicates opportunities. Youth prospects also indicates the degree of opportunities for education. It shows the

Table 5.8 – Correlation test: Growth and Education

	GDP growth vs	
	r	p-value
Education expenditure	–0.209	0.514
Student skills	0.08	0.7659
Years in education	0.09	0.756
Youth prospect	–0.12	0.69
Educational attainment	–0.13	0.64
Data: OECD (2014)		

likelihood of youth to graduate from tertiary education in their life time (OECD, 2014). Three other educational indicators were chosen to complement the results of spending because improvement in the outcome of educational investments itself can show improvement in opportunities as well.

In summary, the relationship between growth and education shows a slight negative correlation. However, statistically, the result is not very significant. This means that the certainty of the result is low.

Growth and Employment

Here, the correlation test between growth and employment is presented, and shows a tendency of a negative correlation between growth and employment. Similarly to the results above, spending was the most relevant variable. For employment, there were more detailed statistics about spending. Particularly interesting for the purpose of this research were labour market programmes, which can show opportunities for individuals to not only become employed, but also to receive vocational training. Some active measures especially focus on opportunities for employment and even indicate opportunities towards meaningful employment. Active measures include counselling, vocational guidance, and labour market training. Details can be found in (OECD, 2005; Grubb and Puymoyen, 2008).

In summary, results show that there are more negative correlations than the positive ones (7 out of 11). Correlation values are generally low: all the values are lower than 0.4. GDP growth rates and personal earnings have the highest correlation.

Growth and Recreation

Little data was available concerning recreation. Nevertheless, two relevant sets of data were

Table 5.9 – Correlation Test: Growth and Employment Indicators

	GDP growth	
	r	p-value
Public expenditure		
Labour market programme (total)	–0.3526813	0.26
Labour market programme (Active measures)	–0.3270247	0.2995
Labour market programme (Passive measures)	–0.3422649	0.2762
Real minimum wage (a lot of data missing)	–0.1556	0.76
Avg. annual wages	0.316	0.3169
Share of full time employment	0.1271	0.6937
Share of involuntary part-timers	–0.1634	0.61
Avg. hours worked (yearly)	0.1999	0.53
Better life index (2013)		
Job security	–0.1634	0.61
Long term unemployment rate	–0.1734	0.5899
Personal earnings	0.3803	0.226
Data: (OECD, 2014)		

obtained as listed in the table below. Interestingly, both of the chosen indicators showed negative correlations when tested with growth rates.

Growth rates and 'time spent for leisure and personal care' showed a particularly high value which has not been encountered yet. The higher the growth rate, the shorter the time is spent on leisure and recreation. The second indication that shows opportunities for recreation is to examine the balance between work and non-work activities, indicated with working hours. OECD had a dataset containing data showing employees working excessive hours – more than 50 hours a week. Longer working hours means less time available for recreation. The correlation between this indicator and growth, however, is not particularly high, with only 0.2 of 1.

Table 5.10 – Pearson's Correlation Test Table: Growth and Recreation Indicators

	GDP growth rate	
	r	p-value
Time spent on leisure and personal care	–0.49	0.11
Employee working long hours (50h< /week)	–0.20	0.54

Data: (OECD, 2014)

Due to limited available data on recreation, government spending on recreation was sought at both OECD and The World Bank. However, the search did not yield relevant data.

This concludes the results section for the 13 selected cities. Below, a summary of the results will be given, followed by notes reflecting limitations. The section thereafter will present results and analysis for the selected two cities.

Summary

To summarise this section, a short account of the findings is provided below.

- Growth and prosperity tend to correlate negatively
- Relationships between growth and prosperity variables are weak
- Growth and time spent on recreation had the highest correlation indicating that less time is spent on recreation when experiencing a high growth

The next section investigates 2 cities in terms of growth and prosperity.

Copenhagen vs Stockholm

In this section, growth and prosperity in the two selected cities – Copenhagen and Stockholm – are analysed by applying time-series. This section follows the same structure as the preceding section . The primary aim of this section is to provide a more context specific understanding of the relationships between growth and the three selected aspects of prosperity (education, employment and recreation),

The selection is based on the results in the previous section. Superficially, both cities are similar in terms of population and some other factors.

Table 5.11 – Data: Copenhagen and Stockholm

	Copenhagen	Stockholm
Population (2012)	2007352	1991310
Pop growth rate (2000 –2012)	0.43	0.67
Pop density (person/km2) (2012)	490	280
Pop share (% of national value)	36	21
GDP share (% of national value)	42.85	29.67
GDP growth rate (2000 - 2010)	0.87	2.62
GDP per cap growth (2000 - 2010)	0.44	1.94
Data: (OECD, 2014)		

Demography In demographic terms, the two cities are quite similar with Stockholm experiencing a slightly higher growth in population in the past decade.

GDP In terms of economy, the cities differ. Both cities have a large share of their respective national GDP. (Copenhagen accounts for nearly half of the Danish GDP while Stockholm contributes around 30%.) The differences become clearer when the growth rates are compared: Copenhagen has growth rates below 1% whereas those of Stockholm are above 1.9%. Roughly, Stockholm has been experiencing twice the size of Copenhagen's growth. The graph below shows notable differences in GDP trends: Stockholm's GDP per capita is constantly increasing, while Copenhagen shows a low, almost stagnant growth.

As the use of national-level data was necessary, a brief look at national data is provided to see how well the situations are reflected in the cities. Presented below is the movement of GDP per capita at the national level. Compared with the one at the city-level, each country follows a similar pattern when it comes to developments. Sweden, as in Stockholm, shows an increased

trend (growth rate: 1.9%), while Denmark, as in Copenhagen, shows an overall stagnant growth (growth rate: 0.1%). The trends of the growth rates are similar to that of the respective cities. At a national level, however, the growth rate of the Denmark is even lower.

Table 5.12 – GDP/cap Growth at the National Level

	Denmark	Sweden
GDP/cap growth (%) (2000 - 2010)	0.09	0.19
Data: (OECD, 2014)		

This similarity in the economic trends of both cases provides a supporting argument to the point about cities being driving forces of national economies.

An important message from this section is that Stockholm has experienced constant growth while Copenhagen's growth has not been that strong – the GDP per capita growth being close to zero (0.44%) over the past decade. With this difference in growth as a reference point, the following sections will investigate how the situation for education, employment and recreation has changed.

Education Spending

Education spending data was compared. As city-level data was not available, national-level data was applied. Overall, both Denmark and Sweden have seen a rise in educational spending from both private and public sources, despite the differences in their GDP growth rates: almost no growth in Denmark, 0.1%, and a growth rate of 2% in Sweden.

Employment

A closer examination of spending on labour market activities is presented in this section. In total, four sets of data were analysed. First, to give an overview, a total public spending on labour market programmes (LMP) is presented. Following, three relevant components within LMP are analysed: public spending on active LMP, spending on training programmes, and employment incentives. In general, one noticeable difference between the two countries was that spending on labour market programmes by Sweden is decreasing compared to that of Denmark. This difference becomes even clearer when a longer term trend is casted.

The graph below shows public spending on both active and passive measures of labour market programmes in Denmark and Sweden. The difference between 'active' and 'passive' measures is in how participants/recipients are involved. In active programmes, participants receive support

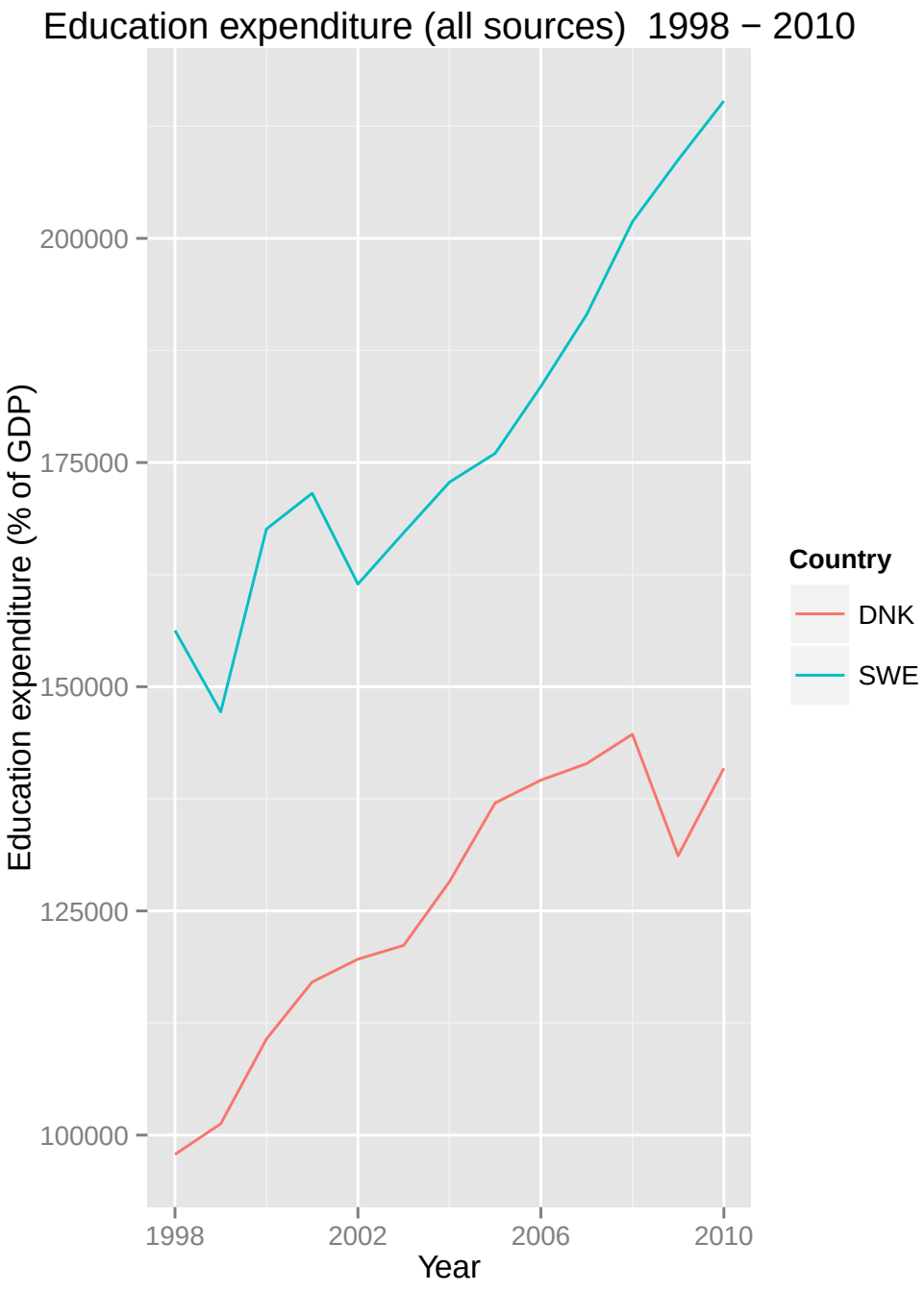

Figure 5.5 – Education Expenditure (1988 2010)

and work towards employment. Examples of those measures are vocational guidance, job training, and job search courses. In contrast, passive measures provide the recipients with unemployment compensation or early retirement (Grubb and Puymoyen, 2008, p. 16). As an overall trend, both Denmark and Sweden faced a declining trend of public spending in LMP, but to different degrees. To compare with the economic growth rates of the two countries, Sweden shows an inverse trend – growing GDP and declining spending on LMP.

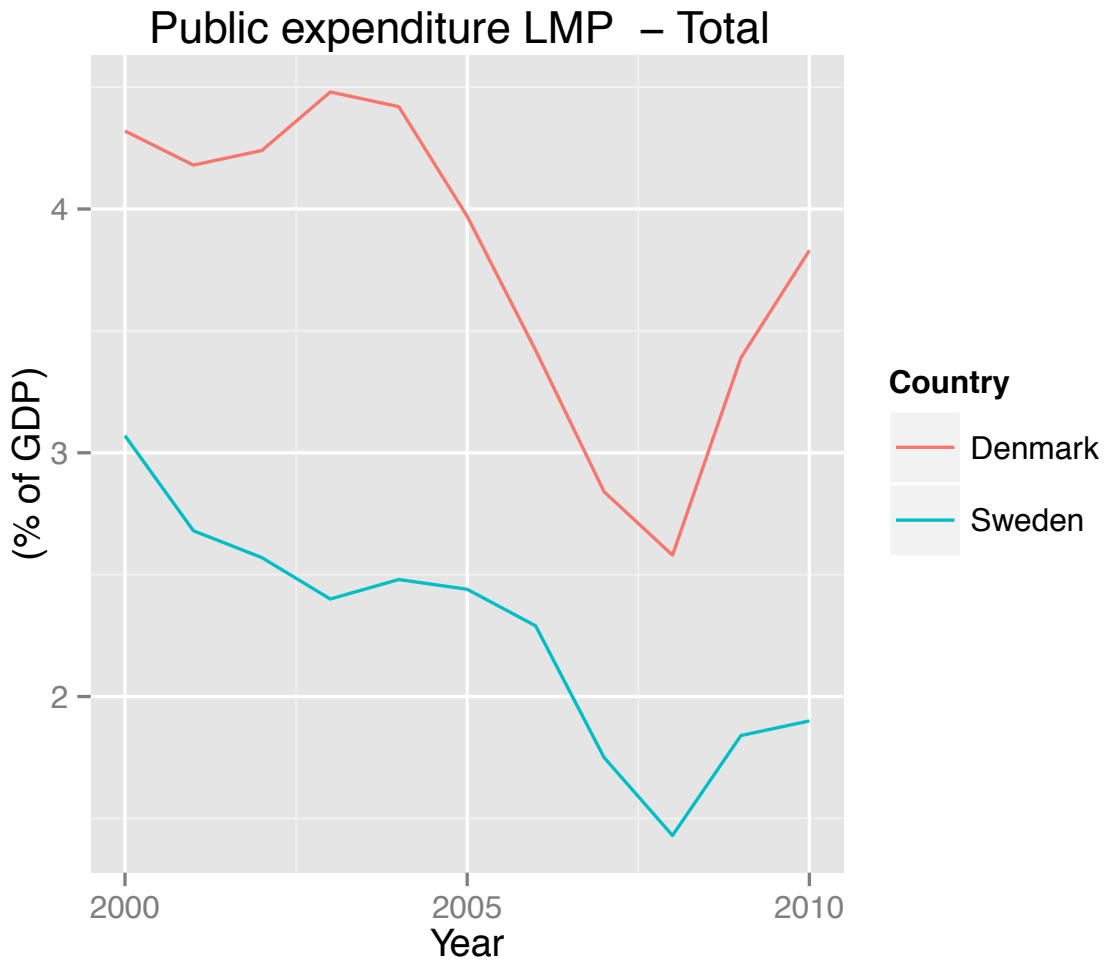

Figure 5.6 – Public expenditure LMP (2000 2010)

The graph below illustrates a similar trend showing public spending on active measures. To note is a strong rise in Danish spending from 2007 onwards, despite a downturn in GDP growth during that period in the Danish economy. Sweden, in this figure, shows the same development as above.

Long-term trends show an intriguing pattern: especially interesting in this graph are two crossing lines. Denmark has been showing an increasing trend, with a stagnation period followed by decline. Around 2000, the size of the public spending of Denmark surpassed that of Sweden. Sweden,

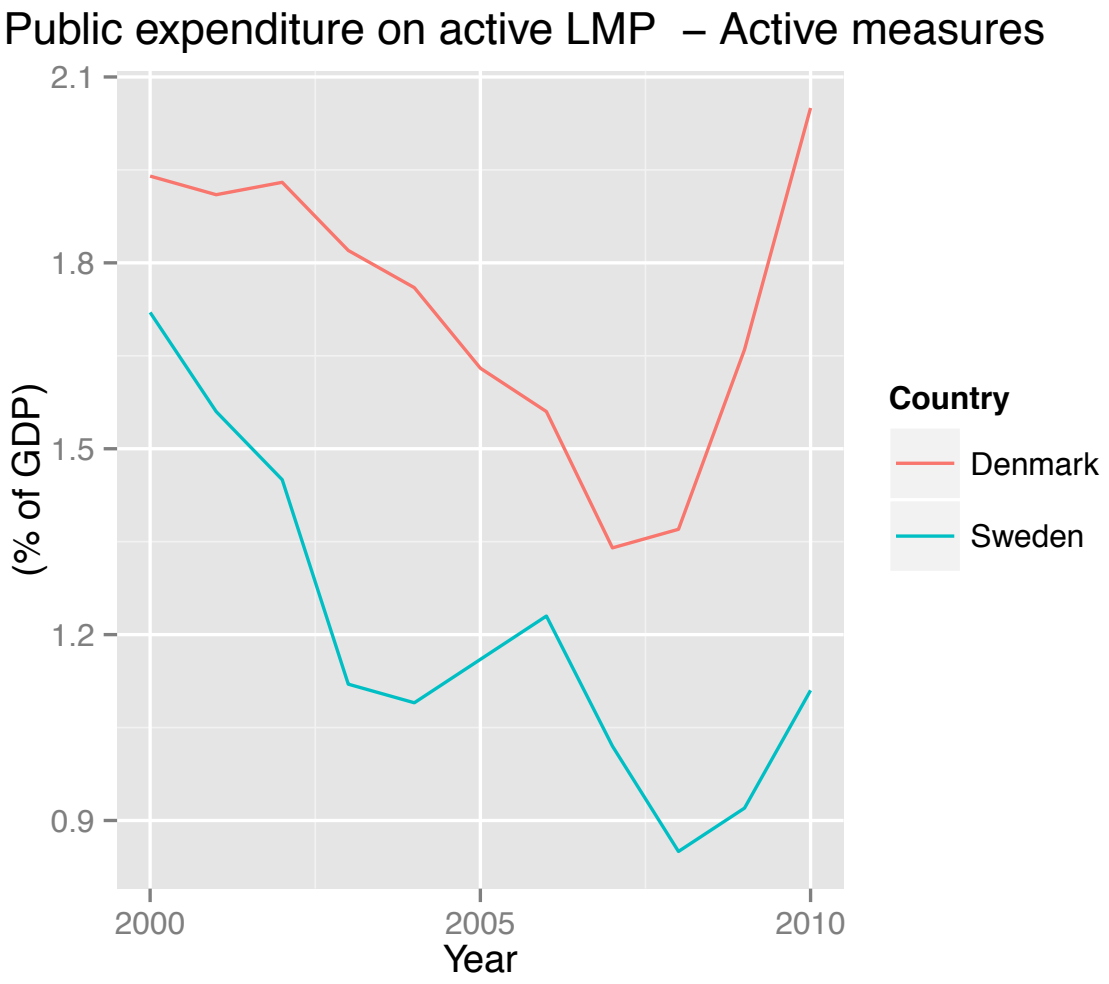

Figure 5.7 – Public expenditure active LMP (2000 2010)

on the other hand, has been cutting down on spending on active measures since the early 1990s. Economic growth rates for Denmark and Sweden over this period of time show that both countries experienced continuous growth.

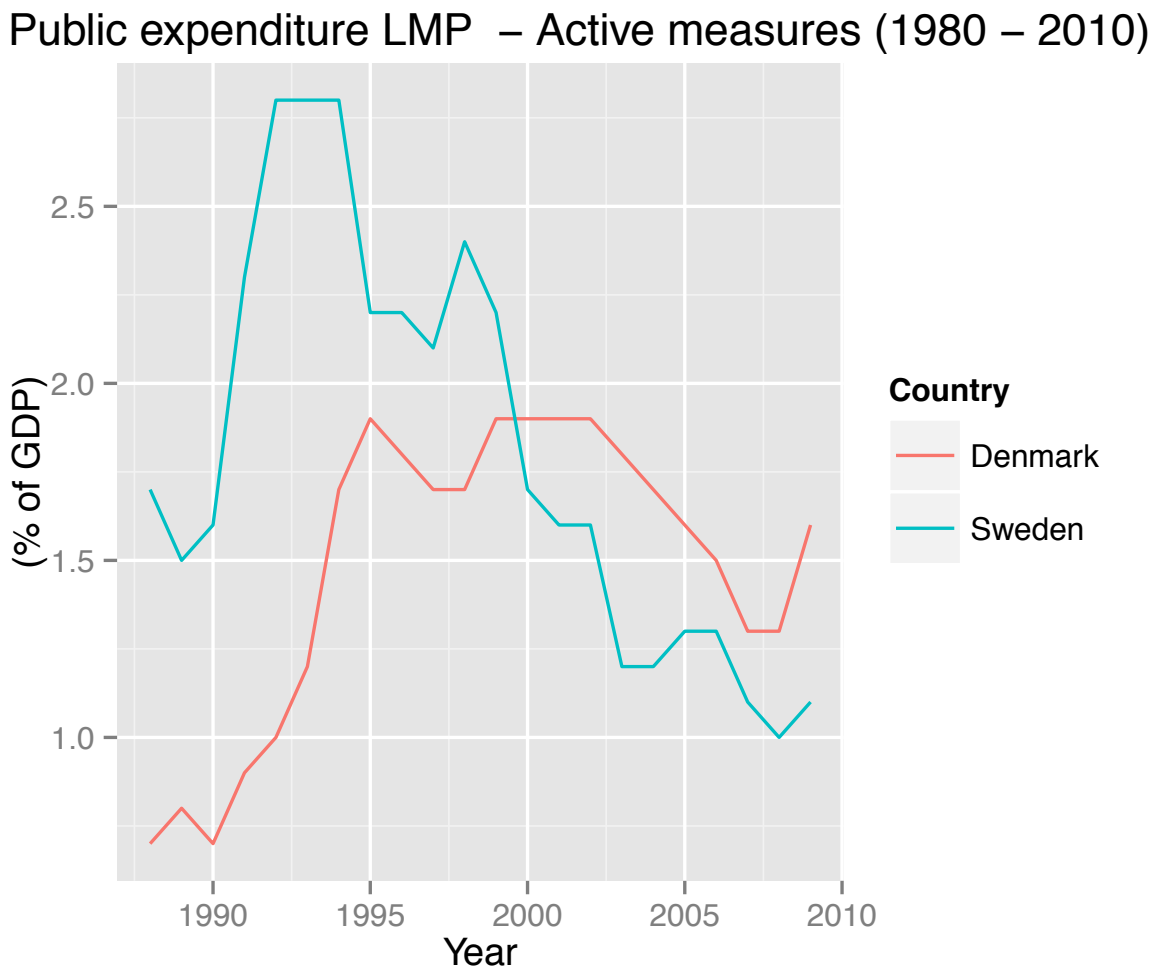

Figure 5.8 – Public expenditure LMP: Denmark Sweden

Recreation

Regarding recreation, data of government spending on recreation, culture and religion is presented in the graph below. Again, the spending of Denmark is rising despite its stagnant GDP growth rates.

Additionally, a city-level dataset from Eurostat shows a general decline in a number of public facilities for culture and recreation such as public libraries, the number of theatres and cinema seats, accompanied by a decline of the usage of public cultural services. Unfortunately, the variety of data as well as the amount of data was too small to draw any general conclusions on the issue at stake, nor was a correlation test possible. Additionally, the decline in the number of libraries

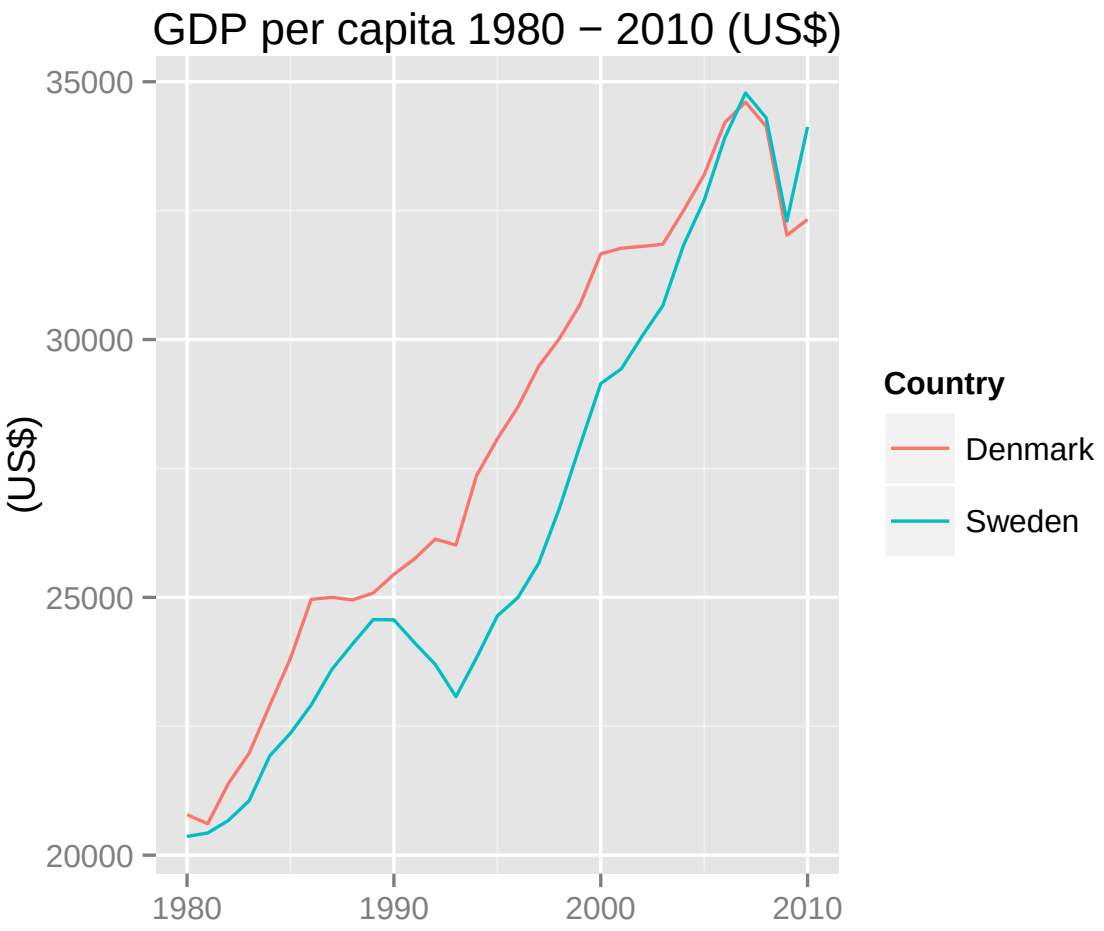

Figure 5.9 – GDP per capita: Denmark Sweden

and cinemas may be affected by the recent expansion of digital technology and the Internet. See the appendix for the statistics.

Complementary Data

Throughout this study, difficulties in obtaining reliable and comparable city-level data were experienced. Even at the national level, limitations in data variety were experienced since little relevant data that could indicate opportunities for the three chosen aspects of quality of life – education, employment and recreation is available.

In this section, some complementary data was selected to the limitation of data.

Social Spending

Social spending describes the money spent on social services such as education, research, and health services (OECD, 2014). This shows the allocation of public resources for social purposes. An interesting trend can be observed when Denmark and Sweden are compared, as illustrated in the graph below. The trends differ significantly: the social spending in Sweden has largely remained the same with a surge around 1995 whereas after 1995 Sweden shows a decline in social spending from public sources. In 2013, the spending was back to the same level as in 1980. Denmark on the other hand, shows an increasing trend since the 1980s. Around 2009, Denmark's social spending surpassed Sweden's.

Summary

This section aimed at providing a context-specific understanding of the changes in selected aspect of prosperity in Copenhagen/Denmark and Stockholm/Sweden. The main focus was on public spending as it indicates changes in opportunity. Both cities shared many properties and patterns. A noticeable difference was the stagnant growth of Copenhagen/Denmark over the past decade, compared to an economically growing Stockholm/Sweden. Despite of this low growth, Copenhagen/Denmark showed upwards tendencies in public spending in all three areas – education, employment and recreation.

The main findings from this section includes:

- The relationship between growth and prosperity can vary depending on location.
- Copenhagen/Denmark, experiencing low to almost no growth, was performing well in all areas contributing to prosperity compared to the growing Stockholm/Sweden.

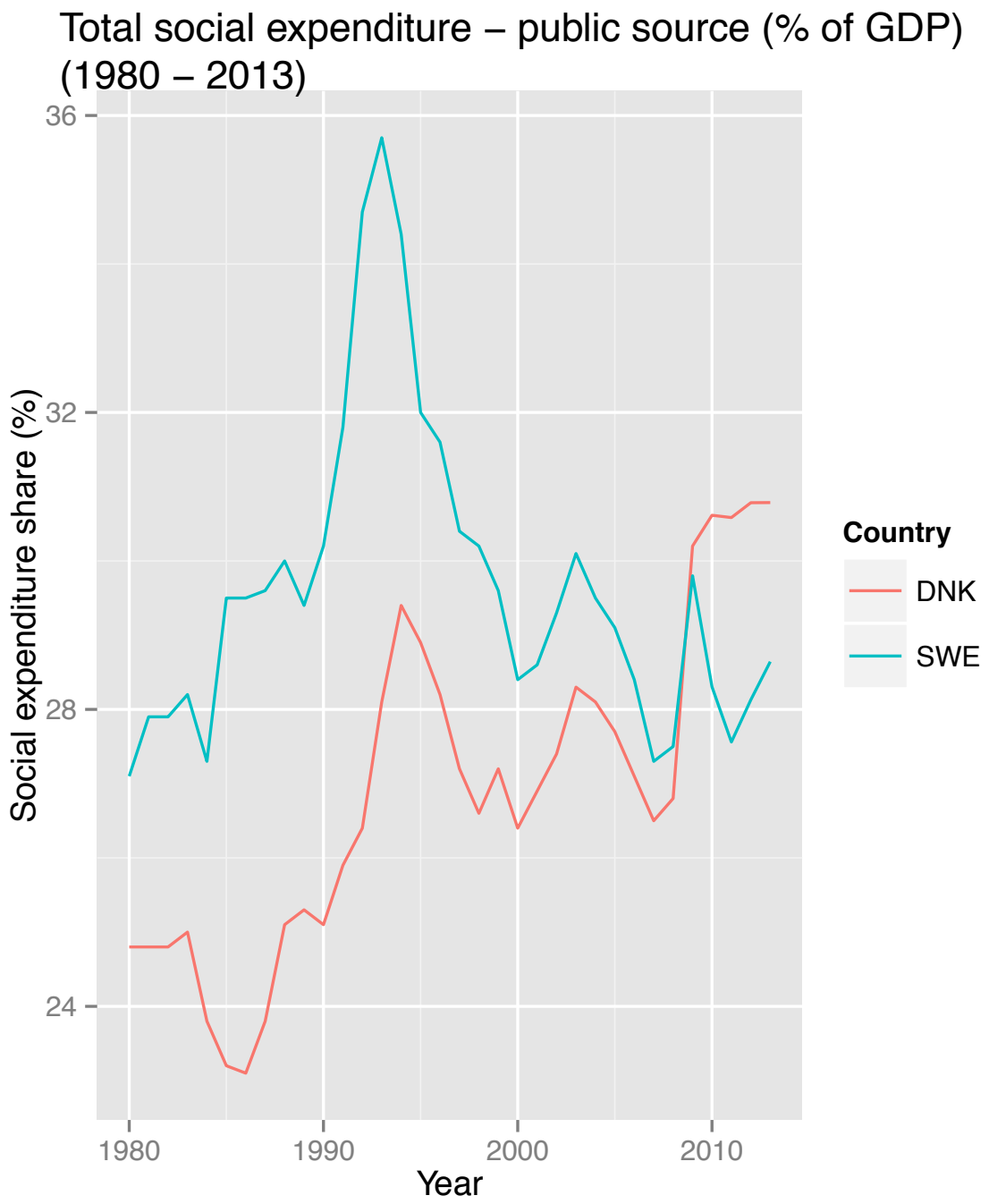

Figure 5.10 – Total Social Expenditure - Public Source

5.3 Discussion

The first research question asked what drives economic growth. Triggers of economic growth can be different factors, socioeconomic and systemic, suggests the review in the beginning of this thesis. So far, the results indicate a weak but negative relationship between growth and prosperity (opportunities for education, employment and recreation). The analysis of Copenhagen/Denmark and Stockholm/Sweden shows that the relationship is different in the two cities: Copenhagen/ Denmark's growth sees to have little correlation with prosperity. When Copenhagen/Denmark experienced little to almost no growth between 2000 and 2010, their spending on education and labour market programmes was rising. Stockholm/Sweden experienced higher growth rates. The growth in educational spending was following the upward trends of city's economic growth. However, public spending on education and labour market growth showed an inverse trend compared to that of Copenhagen/Denmark.

The second research question asked if and how economic growth and prosperity relates. Generally, a negative or little correlation between growth and prosperity was noted. This result of data analysis does not indicate the direction of the relationship. However, as reviewed earlier, some literature suggests that growth can have negative impacts on well-being and aspects of prosperity – education, employment and recreation (Demailly et al., 2013). Literature introduced in the concepts chapter, suggested that prosperity emphasising human flourishing is achievable without economic growth (Victor and Rosenbluth, 2007; Jackson, 2009). Some even suggested that open-ended economic growth is harmful to prosperity as excessive resource usage depletes the Earth's ecosystems (Kubiszewski et al., 2013).

Limitations

What about the equality aspect? As Jackson (2009, p. 5) argues, the most disadvantaged communities can negatively affect the whole society. It is clear that equality plays a crucial role in urban prosperity as the quality of life of the poorest and most deprived will also impact the life of the affluent. Critical Urban Theorists would also adhere to this point (Marcuse, 2009). This thesis does not dismiss equality and recognises it as a crucial part in achieving prosperity. Even though equality has not been the central focus of this study, the emphasis on opportunities also concerns opportunities for everyone, therefore equality. In reality, though, unless a utopian argues, a perfectly equal society is perhaps difficult to achieve, if not impossible once one considers the dynamic of nature and human societies with constant fluctuation and shifts of balance (Hatt, 2009). However, regarding justice and virtue (Sen, 2009), it is desirable to aim for an equal

society to the best of our ability.

The Ways to Shift Away from Growth

Shifting the paradigm of measuring progress – from economic production to people's well-being – is perhaps one of the most important tasks of cities striving for prosperity (Stiglitz et al., 2010). As the results of this study indicate, growth does not provide any support for prosperity – the kind of prosperity in which opportunities for human flourishing is emphasised.

On a global scale, the speed of development and growth in cities is unprecedented. To sustain growth, technological innovations need to be faster, argues Bettencourt and West (2010, P. 913). The author continues, however, with limited resources, this will lead to a collapse of 'socio-economic' fabric. Furthermore, the author argues that it is crucial to understand how to continuously innovate and create wealth without causing social and environment damage.

Change the social logic

As Jackson (2011) suggests, it is perhaps necessary to prompt a change of the logic that society works as a whole – growth that degrade social and ecological sides of the cities and world. Similarly to the argument of path-dependency of economic growth, the author explains how social logic 'locks people in":

> *The social logic that locks people into materialistic consumerism as the basis for participating in the life of society is extremely powerful. But it is also detrimental ecologically and psychologically. An essential prerequisite for lasting prosperity is to free people from this damaging dynamic and provide opportunities for sustainable and fulfilling lives.*
> (Jackson, 2011, p. 163)

The notion that the materialistic consumerism provides the basis for participation in society can be contrasted to the notion of prosperity that emphasise non-materialistic activities as means to participate in society. The kind of participation to the life of society that promotes prosperity rather than social and environmental degradation is arguably through work – at the best case meaningful work. As introduced earlier Jackson (2009) and Robeyns and van der Veen (2007) sees work to be an important provider for meaningful participation in society. This way of participation, does not require consumerism *per se*.

Continuously, Jackson (2011, p. 163), explains that a structural level change is necessary. In author's opinion, there are two ways that can happen. The first is to disincentivise the status competition that is based on materialistic consumerism. Another one, is the promotion of the

prosperity by providing "structures that provide capabilities for people to flourish — and particularly to participate meaningfully in the life of society — in less materialistic ways." This particular notion is in line with this thesis main point on prosperity: it is about providing opportunities.

Additionally, it is important to mention that the finding of this thesis does not deny economic growth *per se* if it is not treated as a primal motive for development of cities. As literature on the drivers of growth suggested, the growth can happen automatically as it is the underlying system of our modern society and cities. Some system critical analysts advocate for a fundamental change of the prevailing economic system, however this might not be easy due to complexity. In such case, what to do in the current system is important. Cities can aim for the aspects of prosperity – education, meaningful employment, and recreation – that fosters quality of life. As a consequence, economic growth might happen. The resulting economic capital can then be redirected to further improve prosperity – human well-being Quental et al. (2010) maintain. The economic growth as a result of focusing on the non-materialistic prosperity does not have to mean the kind of growth that depletes the Earth's ecosystems or increase the gap between the affluent and the poor.

Another way to achieve this shift in orientation from growth to prosperity is to reconsider GDP as a measure for progress should be depreciated as it does not measure what is not in the market (Schneider et al., 2010). There are already many attempts to do this – human development index, various prosperity indices.

However, as (Stiglitz et al., 2010) convincingly argues, that considering how the existing measurements of economic performance can be improved before 'going beyond GDP', is a more realistic approach. There is a good reason why GDP is the standard measure: it has been used for a long time and there are already well-established institutions and practices. Therefore, improving GDP by using the existing system for measuring GDP can be an effective alternative. Adding to this point is that the importance to act on evidence, for fostering a positive urban development – towards prosperity as Bettencourt and West (2010, P. 913) argues. The limited availability of data that concerns the redefined prosperity at city level, as experienced during this research, suggests a need to improve data availability.

6. Conclusion

This last chapter provides a short summary of the main points, and concludes with implications for cities as well as sustainability science.

6.1 Summary of the Main Points

This study aimed to concretise Jackson's theory about prosperity without growth. The main argument of this study includes the following points:

- The results partially support the theory – prosperity without growth (Jackson, 2009). It is partial as not all aspects of prosperity were covered due to the focus of this thesis which was including aspects beyond basic needs
- Economic growth and prosperity have a weak, but negative correlation – the study review and data analysis showed that the overall correlation was leaning towards the negative side
- In the context of developed countries, economic growth needs to be regarded as a consequence of striving towards prosperity and sustainability
- As literature in the field claims, economic growth may damage opportunities or even be the cause of social and environmental sustainability problems. This study has found evidence supporting those ideas

The relationship between growth and prosperity is regarded ambiguous through the analysis shows; however, a tendency exists wherein economic growth correlates *negatively* with several aspects of prosperity. Uncertainty remains in confirming this tendency as there are issues such as limited data availability at the city-level. Uncertainty in statistical computation remains as well, mostly due to the author's limited experience in statistical computation.

The aim of this study was to concretise the theory of prosperity without growth by Jackson (2009). Despite uncertainties concerning statistical findings, the reviewed literature and theories combined together suggest that economic growth, in the context of high-income developed countries, does not contribute to prosperity. Therefore, the result can support the theory of Jackson (2009): prosperity, meaning its aspects beyond basic material needs, does not require growth. Nevertheless, it is also evident that further studies are needed to provide more robust evidence. This study adds some indication, yet, the results are not to be generalised.

6.2 Call for Cities – Yes We Can

UN-Habitat (2013, p. 11) maintains that urban prosperity contains economic productivity and growth as crucial components. However, the findings of the present study suggest that economic productivity *per se* is not a vital component of prosperity that places human flourishing in the centre as far as developed countries, the focus of this study, are concerned. However, the arguments of UN-Habitat (2013) are understandable as they cover a wide range of locations globally which includes cities in low-income and developing nations. As argued earlier, a certain degree of economic development is necessary if basic needs are not yet satisfied. However, in the context of higher-income developed countries where basic needs are covered to a large extent, an uncritical stance on growth may do more harm than good when promoting prosperity. This way, this study contests economic productivity being a crucial component in achieving urban prosperity, as claimed by UN-Habitat (2013). As a consequence, this study suggests three implications for cities:

1. The Salutogenic Approach – Prosperity First As cities continue to grow, their problems can grow as well (Bettencourt and West, 2010). Even in the wealthiest cities, serious problems such as poverty persist. Nevertheless, while acknowledging the urgency of solving urban problems, cities need to focus on what makes their people flourish by providing opportunities and capabilities, just as the salutogenic approach advocates. With the salutogenic approach in mind, cities can find answers to questions such as: how can cities become more prosperous? How can quality of life be increased? How can opportunities for meaningful work, recreation, and education be expanded? While trying to tackle those problems, the provision of the opportunities for people to flourish – providing conditions for good lives – is going to make a city not only attractive to live, but will also improve its environmental sustainability. Their focus will need to shift from a growth agenda focusing on materialistic productivity and consumption to less materialistic pursuits. 'Salutogenic cities' should not be only a slogan: they need to be operationalised so that real flourishing may take place.

2. Measure opportunities for prosperity – How well are people provided with capabilities? As a starting point towards prosperity, cities can apply the approach used by this thesis to measure the *if* and *how well* cities provide opportunities for prosperity. This can be done by utilising the framework developed by this study. However, an improvement of the framework is also needed. As experienced throughout the analysis, the lack of data made the examination of all three domains of prosperity (meaningful employment, recreation and education) difficult. Without concrete data, meaningful discussions involving decision makers and citizens cannot

reasonably happen. The absence of relevant material for grounded discussions makes it easier for the status quo to remain. Finally, the lack of the data leads to the last point for the implications concerning cities.

3. Create databases for cities – Data focusing on opportunities and capabilities are needed An easily accessible database with data that can be used to measure prosperity can bring progress to cities. It would enable interested individuals to engage in working towards prosperity in their own cities. The lack of databases with easily accessible data, especially at the city-level, posed a serious challenge to conducting this paper's analysis. Country-level databases exist, though, and some provide a wide range of data e.g. OECD. Nevertheless, when it comes to the city-level, the amount and variety of data decrease drastically. Another caveat of the data available relates to the point made earlier about GDP being a major and dominant tool for measuring progress. An intense economic orientation of conducted research was especially noted when gathering data. Additionally, the differences in data availability between cities are large, thereby hindering comparison and research with reliable results.

Overall, cities and their dwellers can benefit from applying the salutogenic approach combined with measuring prosperity. The environment may also benefit as focusing on the non-materialistic aspects of prosperity will reduce material throughput and negative impacts on the environment.

6.3 Implications for Sustainability

The present study showed that economic growth does not significantly contribute to redefined prosperity, focusing on opportunities for education, employment and recreation in the context of cities in developed countries. This adds to existing arguments against the promotion of growth. Another contribution lies in suggesting an approach that emphasises human flourishing beyond basic needs by applying the ideas of salutogenesis (Antonovsky, 1996) and sustainability arguments by Sen (2013). The findings suggest that this approach has the potential to broaden the research portfolio of sustainability science by investigating the rather neglected aspects of human flourishing, and the pursuit of meaningfulness through capabilities. By combining the existing knowledge on sustainability (which aims to ensure the fulfilment of basic needs while considering ecological limits) with the salutogenic approach, a more comprehensive idea of sustainability can be established. This thesis recommends further research that can establish clearer links between the approach of sustainability science and the prosperity/capabilities approach.

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Appendices

A. Tables - City data

Table A.1 – GDP Share of National Value (%) (2010)

City	GDP share (%)
Vienna	36.30
Toronto	18.54
Zürich	18.95
Copenhagen	42.85
Helsinki	37.33
Paris	30.71
Dublin	48.27
Tokyo	31.86
Amsterdam	15.35
Oslo	32.75
Stockholm	29.67
London	27.82
New York	7.26
Mean	29.05
Data source: OECD.stats	

Recreation - cultural facilities in Copenhagen Stockholm

Table A.2 – GDP Growth Rate (%) between 2000 and 2010

City	Value
Vienna	1.496
Toronto	1.242
Zürich	0.870
Copenhagen	2.243
Helsinki	1.736
Paris	3.357
Dublin	1.123
Tokyo	1.665
Amsterdam	2.623
Oslo	2.328
Stockholm	1.457

Source: OECD (2014)

Table A.3 – Population Share of National Value (%) (2010)

City	Pop. share (%)
Vienna	32.43
Toronto	19.13
Zürich	15.42
Copenhagen	35.97
Helsinki	27.34
Paris	18.71
Dublin	37.86
Tokyo	27.79
Amsterdam	14.38
Oslo	25.31
Stockholm	21.00
London	19.11
New York	5.30
Mean	23.05

Source: OECD (2014)

Table A.4 – Number of Public Libraries

Year	Copenhagen	Stockholm
1999–2002	23	66
2003–2006	21	73
2007–2010	.	47
2010–2012	.	44

Data: Eurostat

Table A.5 – Number of Theatres

Year	Copenhagen	Stockholm
1999–2002	50	44
2003–2006	38	40
2007–2010	.	.
2010–2012	.	49

Data: Eurostat

Table A.6 – Number of Cinema Seats per 1000 Residents

Year	Copenhagen	Stockholm
1999–2002	23.2	23.5
2003–2006	.	25.0
2007–2010	.	15.6
2010–2012	.	14.8

Data: Eurostat

B. Search strings

Below, this search method is detailed, the structure following the order of the research questions and corresponding variables

1. Drivers of growth Search on Scopus database was conducted to examine the first research question – What drives economic growth?

TITLE-ABS-KEY("city" OR "cities" OR "urban") AND TITLE-ABS-KEY("economic growth" OR "growth") AND TITLE-ABS-KEY("driver " OR "driving force" OR "drivers of economic growth" OR "drivers of growth") AND LANGUAGE(english) AND DOCTYPE(ar OR re) AND SUBJAREA(mult OR arts OR busi OR deci OR econ OR psyc OR soci) AND PUBYEAR $>$ 2008 AND PUBYEAR $<$ 2014

This search yielded 184 results. Due to time constraints, not all articles were reviewed. Instead, five randomly selected papers that mentioned the drivers of urban economic growth were considered. To randomise the selection, the results were reordered in an ascending order by the first author's last name. Titles and abstracts were screened to determine the relevance of an article.

The search below corresponds to the second research question:

1. The relationship between growth and education

In essence, this search string searched studies that include city, cities or urban and economic growth and quality of life in either title, abstract or keywords. This search produced 22 results.

Furthermore, to determine relevance, each the title, abstract and, in some cases, the entire article were screened. Screening the entire article was necessary for articles with uninformative titles and abstracts. After the screening, four articles were judged relevant on grounds of dealing with the relationship between economic growth and quality of life.

The keyword quality of life was used as the meaning of prosperity can vary to a large extent. The meaning of quality of life can also vary. However the variation is narrower.

Applying the same method, a review of the relationship between economic growth and opportunities for education, employment and recreation was conducted. The difference from the strings above is that the search word 'opportunities' was added as it relates to capabilities. The search strings are listed below.

Search strings:

Growth and educational opportunities: (TITLE-ABS-KEY((city OR cities OR urban)) AND TITLE-ABS-KEY("economic growth") AND TITLE-ABS-KEY("opportunit ") AND TITLE-ABS-KEY("education" OR "educational opportunit*") AND LANGUAGE(english)) AND DOCTYPE(ar OR re) AND SUBJAREA(mult OR arts OR busi OR deci OR econ OR psyc OR soci) AND PUBYEAR > 2003 AND PUBYEAR < 2014 AND (LIMIT-TO(SRCTYPE, "j")

This search was originally covering five years. However, due to limited results, the search period was extended to ten years.

Growth and employment opportunities: (TITLE-ABS-KEY((city OR cities OR urban)) AND TITLE-ABS-KEY("economic growth") AND TITLE-ABS-KEY("opportunitc) AND TITLE-ABS-KEY("employment" OR "employment opportunit " *OR "job*") AND LANGUAGE(english)) AND DOCTYPE(ar OR re) AND SUBJAREA(mult OR arts OR busi OR deci OR econ OR psyc OR soci) AND PUBYEAR > 2008 AND PUBYEAR < 2014 AND (LIMIT-TO(SRCTYPE, "j"))

Growth and recreational opportunities: (TITLE-ABS-KEY((city OR cities OR urban)) AND TITLE-ABS-KEY("economic growth") AND TITLE-ABS-KEY("opportunit ") AND TITLE-ABS-KEY("recreation " *OR "leisure*") AND LANGUAGE(english)) AND DOCTYPE(ar OR re) AND PUBYEAR > 1974 AND PUBYEAR < 2014 AND (LIMIT-TO(SRCTYPE, "j")

Regarding the latter search strings, the search period was expanded to the past 40 years, due to the fact that five years of search yielded only two irrelevant results. However, even the 40 years range of search yielded only four articles in total – none [appendix?]of them being relevant.

As the originally designed search with three chosen variables did not yield satisfying results, an additional search to review the relationship between growth and quality of life was conducted. Quality of life was chosen as it is a major component of this thesis. This inquiry was set to search for literature covering the past five years, dealing with the relationship between economic growth and quality of life at a city-level. The following strings were used:

TITLE-ABS-KEY((city OR cities OR urban)) AND TITLE-ABS-KEY("economic growth") AND TITLE-ABS-KEY("quality of life") AND LANGUAGE(english)) AND DOCTYPE(ar OR re) AND SUBJAREA(mult OR arts OR busi OR deci OR econ OR psyc OR soci) AND PUBYEAR > 2008 AND PUBYEAR < 2014

C. Selected cities

For the data analysis, a global-scale trend was computed using data from The World Bank. Furthermore, 13 highly ranked cities were selected from the city prosperity index (CPI) by (UN-Habitat, 2013). CPI was constructed and measured by UN-Habitat (2013) using the five components of urban prosperity. The reason for choosing those 13 cities was that they belong to higher income countries which are the focus of this thesis. Originally, the top 15 cities in CPI were chosen; however, Melbourne and Auckland were excluded due to lack of data of OECD. The list of the considered cities are:

Vienna, New York, Toronto, London, Stockholm, Helsinki, Dublin, Oslo, Paris, Tokyo, Amsterdam, Zurich, Copenhagen

Furthermore, two cities from the list above – Stockholm and Copenhagen –are selected to perform a detailed analysis considering contextual concerns. Those two cities were chosen as they showed clear difference in some of the indicators when their trends of the selected variables were examined in terms of trends. Besides they are approximately similar in the size, economic weight in the nation, culture.

D. Indicators for operationalisation

Domains for Measuring Prosperity – Implied by Tim Jackson

Below, some indicators implied by Jackson (2009) are briefly introduced. However the author is not very clear on how to operationalise prosperity, but implies several indicators that could be used to measure prosperity. Below is the list of these possible indicators distilled from the book.

- Quality of life (life expectancy, longevity, physical and mental health, education, democratic entitlements, security
- Health and happiness of our families
- Strength of relationships and trust in the community
- Sense of belonging and trust in the community (Jackson, 2009, p. 36)
- Satisfaction at work, have a worthwhile/meaningful employment
- Sense of shared meaning and purpose
- Potential to fully participate in the life of society (Jackson, 2009, p. 16 - 47) Jackson (2011, p. 163) implies that some measures foster prosperity
- Investment in public amenities and spaces that create opportunities for leisure and self-development
- Strengthening communities and building strong social ties that enrich human life without enlarging the ecological footprint

Capabilities Index

Here, the indicators suggested by Robeyns and van der Veen (2007) are listed. These are indicators from the capabilities index developed for measuring the sustainable quality of life in the Netherlands.

Domains for a capability-index: 1. physical health 2. mental health 3. knowledge and intellectual development 4. labour 5. care 6. social relations 7. recreation 8. shelter 9. living-environment 10. mobility 11. security 12. non-discrimination and respect for diversity 13. political participation (Robeyns and van der Veen, 2007, p. 59)

UN-Habitat's Framework for Urban Prosperity

UN-Habitat (2013) suggests a comprehensive framework for urban prosperity with five components: 1. Productivity - economic growth 2. Infrastructure, physical assets and amenities 3. Quality of life: social services – education, health, recreation, safety and security "required for improved living standards, enabling the population to maximise individual potential and lead fulfilling lives". 4. Equity: poverty and inequalities 5. Environmental sustainability

Merged indicator list: focusing on quality of life

* Good health
* Knowledge and intellectual development
* Good social relations
* Recreation
* Participate in decisions and activities influencing one's life
* Meaningful work/labour
* Safety, security
* Non-discrimination and respect for diversity
* Shared meaning and purpose