SIMD AND BEYOND: MULTI-FACETED POLICYMAKING IN SCOTTISH COMMUNITIES

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EXECUTIVE SUMMARY

SCOTTISH INDEX OF MULTIPLE DEPRIVATION (SIMD)

The SIMD is an index that measures seven areas of deprivation referred to as "domains" and their interactions: Income, Employment, Education, Health, Crime, Geographic Access and Housing. Data zones are small output areas, between 500 and 1,000 residents, with boundaries created by the Scottish Government based on socio-economics characteristics. The SIMD perceives multiple deprivation as relative, comparing the 6,976 data zones across Scotland. The rankings are based on a weighted structure, weighing the Income and Employment domains by a factor of 12, Health and Education by 6, Access by 4, Crime by 2 and Housing by 1.

Use

SIMD data zone rankings are utilised in creating targets in higher education widening access programs, in healthcare funding and as a determinant in Local Authorities' funding allocations.

Strengths

The SIMD is a useful index to identify areas with concentrations of need because of its small output areas, accessibility, consistent delivery, and statistical rigour. Data available on small-areas, such as data zone and intermediate zone levels allow for a more thorough understanding of the community and tailored responses to localised problems. The Scottish Government releases the SIMD datasets and explanatory documents, making it accessible and attempts to make it understandable to all citizens. The SIMD is released every 4-years, providing a consistent way to map needs and levels of deprivation across the country. Moreover, the methodology and indicators are re-evaluated by experts and users of the index upon the release of the next SIMD.

Limitations

The SIMD's construction has limitations that restrict its use to identifying problems, rather than attempt causation. When detecting areas experiencing multiple deprivation, the weights associated to the domains that may not align with the priorities of the community. The weights can skew the rankings. Moreover, the relativity of the rankings makes it difficult to assess the deprivation of a community and whether its improving overtime. Tracking changes is additionally difficult due to changing data zone boundaries and methodology, making SIMD's incomparable to one another. The SIMD is also unable to identify individuals that are deprived for policy targets. There are deprived individuals living in affluent areas and affluent individuals in deprived areas, referred to as the ecological fallacy when the assumptions of an area are applied to an individual.

The choice of domains and indicators in the SIMD and their methodology are flawed in many ways. Overall, the indicators may not always be a true reflection about the extent of problems, focus on the incorrect elements or disregard important aspects of deprivation.

In comparison to local perspectives and academic literature, there are community issues that are not identified by the SIMD. Social capital and access to adequate green space are areas neglected by the SIMD but found to be important to the community and deprivation. Social capital refers to the levels of social cohesion, sense of community, and residents' ability to influence governance (Dobbs, 2016). The level of social capital, specifically cohesion, has the ability to affect residents' perceptions of deprivation (cite). Green space for community gatherings or children's play space is often linked to

deprivation and the social cohesion. The SIMD is the only UK indices for multiple deprivation that does not consider wider physical environment factors.

MOUNT FLORIDA

Primary research was collected from residents of Mount Florida on topics from the SIMD and the opportunities available in the community. Residents' perceptions were compared to findings from the SIMD and other quantitative data and past policies. The comparison led following key points:

- The weights of the SIMD do not appear to reflect the priorities of the residents in the community.

- There are elements missing from the SIMD that are felt to be important to both residence and academic literature on perceptions of deprivation. Social capital and access to adequate green space were two topics seen as sorely missing from the SIMD.

- Discrepancies between the SIMD measures and residents' opinions are most apparent in the Access and Housing domains, revealing a limitation to the SIMD and its indicators.

RECOMMENDATIONS

In recognition of these findings, is it recommended that the Mount Florida Community Council consider the following recommendations:

1. Discrepancies between the SIMD scores and local perspectives indicate that the Community Council should seek a variety of methods to ascertain residents' opinions and primary concerns.

2. Strategically adopt initiatives to take advantage of Scottish Government and Local Authority opportunities and funding. There are initiatives that other levels of government are promoting and highlighting, information that can be utilised to increase the likelihood of receiving funding.

3. Consider other strategies such as community-led action research or a local deprivation measure that can be used in conjunction with other statistics.

* More thorough statistics and recommendations are to be found in the full Mount Florida Community Profile Report.

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CHAPTER 1: INTRODUCTION

1.1 SCOPE

The purpose of this report is to critique the Scottish Index of Multiple Deprivation (SIMD), a commonly used measure for deprivation across Scotland, in its application to understanding small-areas. Its continued use in policymaking and funding allocation highlight the need to understand the limitations of the index. Residents' lived experiences and perceptions are missing from a strictly quantitative approach, neglecting some aspects of deprivation and how these dimensions interact. This is notably important for policies around deprivation, where researchers frequently neglect those impacted by poverty and do not attempt to engage disadvantaged groups in formulating solutions (Thurber, Bohmann and Heflinger, 2017). These findings are relevant to all levels of policymaking from the Scottish Government to Community Councils, who attempt to identify community issues and develop policies in response.

1.2 AREA CLASSIFICATION

Area classification is the use of socio-economic and demographic data to group areas with similar population characteristics, often on the basis of Census data (Office for National Statistics, https://www.ons.gov.uk/methodology/geography/geographicalproducts/areaclassifications/2011areaclassifications/ n.d.). Geodemographics uses area classifications and analyses individuals based on their residence (Longford, 2005). It utilises the assumptions made from an area classification, applying the predominant socio-economic characteristics of the community onto an individual, to make further inferences such as age, ethnicity, education or employment, based on the area the resident lives in (Vickers, 2006). The creation of an area classification is a trade-off of thoroughness and simplicity (Voas and Williamson, 2006). The summary of data is only useful in processable amounts of information, however the fewer number of dimensions or variables results in the likelihood of a less accurate classification.

1.3 DEPRIVATION

Peter Townsend's conception of deprivation is the commonly used academic definition and provides the scope for many indices, including the SIMD. He defines deprivation as an individual's relative disadvantage to the community or wider society (Townsend, 1987). Townsend (1987) stresses relativity to the prevailing living standards is what differentiates deprivation from poverty, which is the general lack of material resources. Consequentially, an individual can experience deprivation without being in poverty and only experience deprivation in certain aspects of life. Deprivation is not a zero-sum game. Townsend (1987) recognizes the subjective and socially constructed nature of deprivation, that goes beyond the supposedly objective measurement of deprivation from quantitative statistics. Multiple deprivation is an expansion of previous conceptions of deprivation, recognizing deprivation is more than the sum of its parts and dimensions working in conjunction with one another will have a greater impact on an individual's experience of deprivation (Noble *et al.*, 2006). Currently, the Index of Multiple Deprivation (IMD) for small-area geographies are the most widely used indices. IMD data is available across the UK via the governments of England, Northern Ireland, Scotland, and Wales whom each use separate methodologies. The focus of this paper will be the Scottish SIMD and their chosen domains and indictors.

1.4 LOCAL KNOWLEDGE

In recognition that multiple deprivation is based on societal norms, it is important to understand the local environment when assessing the levels of deprivation in a neighbourhood. Local knowledge improves understanding of a community and consequently, policymaking in small-areas. The idea of co-governance and participatory action research (PAR) is one mechanism to pursue the addition of lived experiences. Co-governance is the direct involvement of citizens, creating buy-in for policies and their outcomes (Lowndes and Sullivan, 2008). Their participation in policymaking and implementation strategies can either be rallied around a government-led initiative or citizens' commitment to a program that exists outside political structures (Lowndes and Sullivan, 2008). A method of involving citizens in policymaking is PAR, when decision-makers and researchers combine their expertise and evidence sources with the opinions and stated needs of residents, bringing together

academic and popular knowledge (Fals-Borda and Rahman, 1992). The involvement of citizens is key, however there are other methods where the community's role is more dominant. Community-led action research as described by the Scottish Community Development Centre (2016), entails residents' involvement in problem-definition, evidence-gathering and testing solutions. Their active role in the process can be seen as a new form of policymaking, achieving the Scottish Government's aspirations around the empowerment and participation of individuals and communities in local policies (Scottish Community Development Centre, 2016). Consequentially, action-led research can be important to obtaining local experiences, that is useful to policymakers, politicians or academia.

1.5 SIMD

The SIMD feeds into policy development and funding decisions, so it is important that appropriate indicators are adopted. The SIMD is an index of 7 domains with 38 indicators. It is a weighted index, based on the 2003 Index of Multiple Deprivation created by Oxford University (Scottish Government, 2016a). The domains are weighted as such: Income and Employment by 12, Health and Education by 6, Access by 4, Crime by 2 and Housing by 1. It currently ranks 6,976 data zones, from the least to most deprived, across Scotland. Data zones' boundaries are created based on physical geography and grouping households of similar socio-economic conditions (*Scottish Neighbourhood Statistics Guide*, 2005). This research will analyse the most recent 2016 SIMD.

CHAPTER 2: SIMD REVIEW

2.1 SIMD USES

While also used for academia, in the public sector, deprivation is an important cross-departmental policy issue that is frequently used in the analysis of policy and funding allocation for many levels of governance. The SIMD is mostly used to identify individuals for specific program targets and the identification of deprived areas for intervention by the Scottish Government. While the main uses of the SIMD revolve around the Scottish

Government, it can be used by other levels such as Local Authorities or Community Councils in more localised policymaking processes.

Local Authority Funding

Local Authorities (LA) in Scotland have a fair amount of autonomous power in policy decisions, and their funding is often allocated according to the SIMD ranks. The Scottish Government Grant Aided Expenditure is distributed between LAs based on their relative spending and indicators around population, geography and deprivation (Audit Scotland, 2017). There lacks a further breakdown on funding allocation, but it is noted that deprivation plays a role in funding schemes, that ultimately dictate what LAs and Community Councils are able to accomplish.

Education

SIMD rankings are used to identify deprived areas and target individuals for policies that aim toward widening access to education. The Scottish Government utilizes the SIMD in attempt to tackle the under-representation of disadvantaged students in Scottish universities. The Commissioner for Fair Access' *Laying the Foundations for Fair Access* Annual Report (2017) states reliance on SIMD data to determine deprivation, assisting in decision making around acceptances and bridging programmes. Moreover, the department sets goals about disadvantaged students' admissions based on the proportion of incoming students from SIMD20, the quintile of most deprived areas in Scotland (*Laying the Foundations for Fair Access*, 2017).

Healthcare

Lastly, the English IMD was used by the England's NHS in capitation funding modelling by Primary Care Trusts (PCTs), before their elimination in 2013. PCTs were responsible for spending over 80% of the NHS budget on primary and community health services to ensure similar levels of health services and reduce health inequalities in places with greater needs (Department of Health, 2011). While the 2011 capitation formula was also based on demographics and costs in the area, the 2004 IMD's income deprivation measure for England was also used in the formula. Moreover, the PCTs provided index-based bonuses to GPs working in high deprivation areas. The 2004 English IMD was likewise used as an indicator in identifying "Spearhead areas", designated as areas ranking highest in deprivation of health measures and requiring greater resources (Department of Health, 2011). While the PCT

system is no longer in place, it is indicative of the trust governments place in the IMDs and how it is used to make important policy decisions that require accurate information.

Inappropriate application

Simpson (1996) warns that the construction of IMDs reflect their purpose and the transfer of data without this consideration and its limitations can result in inaccurate findings. The choice of variables and their weights, the standardisation and method to express the data, will reflect the purpose of an index (Simpson, 1996). If any of these factors are incompatible to how the index will be applied next, it can mask important data or express the data in a potentially misleading manner. The SIMD is largely relied upon by various departments and institutions, which can be problematic when used in different contexts than it was intended (Simpson, 1996; Fenton, 2013).

2.2 SIMD ADVANTAGES

The SIMD provides statistics based on data zones, containing between 500 and 1,000 residents; smaller geographical units than many other multiple deprivation indices (Scottish Government, 2016a). By providing data for smaller populations, policymaking can be more accurate and responsive to on the ground needs of citizens. The index prevents the arbitrary allocation of funding based on an individuals' perception of areas in need. It delivers a consistent mechanism to identify areas with a concentration of deprivation, ensuring there is a reliable way to map these needs in the future (Reading, Openshaw and Jarvis, 1994). A new SIMD is published every 4 years, keeping a better pulse on localised deprivation than Census variables released every decade. Moreover, it is a multi-dimensional index, creating the opportunity to explore how variables of deprivation interact with one another and could potentially spur further research and analysis based on these hypotheses (Reading, Openshaw and Jarvis, 1994).

The SIMD is an accessible dataset to citizens wishing to explore the SIMD data, which the Scottish Government puts great effort into making comprehensible through maps, technical notes and introductory documents. The SIMD is fairly simple, allowing areas to be ranked against one another, yet maintains a "national statistics" status (Scottish Government, 2016a). There is a Measuring Deprivation Advisory Group of users and experts that meet

twice a year and a Peer Collaboration Group of statisticians to advise on indicators and methodology before the release of the next index (Scottish Government, 2016a). The indicators in the SIMD were chosen explicitly on the basis of their robustness, suitability to measure deprivation, ability to be up-dated, and impact on experiences of deprivation (Scottish Government, 2016a). The index has not greatly changed since its creation in 2003 by Oxford University, relying on the thorough research completed at the time. Notwithstanding, the methodology for a number of indicators has been changed or altered to reflect a more accurate measure of deprivation, including the addition of a Crime domain.

2.3 SIMD LIMITATIONS

The SIMD is utilised to identify problems, rather than attempt causation, that can be used to create solutions. Even when identifying areas experiencing multiple deprivation, it can be problematic in its boundaries, ecological fallacy and the construction of the index.

Boundaries

The modifiable aerial unit problem, describes a situation where the dataset will yield considerably different results or inferences based on how the data's boundaries are drawn (Vogel, 2016). Boundaries are often chosen by Census Bureau staff or other bureaucrats without local insights (Sperling, 2012) and as a result, boundaries rarely match with residents' perception of their neighbourhood (Sampson, 2002). This can be problematic for ascertaining issues or tailoring a policy to a specific problem or phenomenon.

Ecological Fallacy

Classification is largely used as a tool for simplification, to make large amounts of data comprehensible based on generalizations. The problem with these generalizations is, not all individuals will embody the characteristics of the majority. Incorrectly making assumptions or inferences about an individual based on their geography is referred to as ecological fallacy (Vickers, 2006). The Scottish Funding Council (2018) recognizes the problems in using the SIMD measure for their goals revolving around deprived students' admissions but continues to use the SIMD as its primary measure for widening access. The pervasive use of the SIMD is

due to recognized problems in finding other robust indicators that are available across the Scotland to provide breadth and comparability (Weedon, 2014).

Construction of the Index

The 2016 SIMD is explicit in the introductory document about what the SIMD can and cannot be used for. The SIMD is not able to provide explanations or quantify how much more deprived one area is over another because the ranking is relative (Scottish Government, 2016c). Moreover, the level of deprivation over time cannot be accurately tracked, outside of a few absolute measures that allow for some simple comparison, for a number of reasons. As previously mentioned, the relative nature of the SIMD means that if a data zone increases or decreases in rank, it may not be reflective of a change in the data zone's level of deprivation but can occur from drastic changes in other data zones that led to a change in ranking (Fenton, 2013). Additionally, changing boundaries and methodologies create significant barriers for comparison.

The SIMD is an ambitious index upon closer inspection of the 7 domains, which combine a variety of indicators through varying techniques and time periods. While the SIMD is a classification device, there are advanced statistical procedures that have flaws and caveats which are only recognized upon examination of the methods in the *SIMD16 Technical Report* document, that must be understood before the SIMD can be understood or utilised. Moreover, the use of appropriate proxies as indicators, continues to be a problem in indices of multiple deprivation like the SIMD. There is arguably a lack of direct measures for poverty in small areas, therefore indices are solely constructed using proxies or modelled estimates (Fenton, 2013). Voas and Williamson (2001) conclude that small areas are different in different ways, consequentially an index will never be able to fully describe the area, regardless of the complexity or how well-chosen the indicators.

The SIMD focuses on material deprivation and neglects other measures such as social deficiency. Townsend (1987) highlights social deprivation, as the roles, relationships, customs and rights of members in a society, which are important elements of multiple deprivation. Most authors recognize the need for measurement of social factors but find difficulty obtaining updated and reliable data, consequentially using proxies for social deprivation that are not always suited to measuring the dimension (Norman, 2010).

Domains

Appendix A has a full list of the SIMD's domains and indicators.

The Income domain is linked to the government of the day and changes to the benefits scheme will wildly change the SIMD Income domain. Currently, the domain is dependent on the Universal Credit system and their conception of those deserving government benefits and supports (Scottish Government, 2016a). However, it is notable that in the *SIMD16 Technical Notes* that Working or Child Tax Credits for low income families is based on earning a weekly income of less than 60% of the median, which is £228 a week (Scottish Government, 2016a). The New Zealand IMD critiques the UK countries' IMD measures for income, for not adopting an income-tested benefits measure, providing a more accurate depiction of income deprivation.

The Scottish Government (2016a) *SIMD16 Technical Report* notes that the SIMD Employment domain measure is not an official International Labour Organisation (ILO) definition of unemployment but defend their measure as the best for small-area geography.

In the Health domain, 5 of the 7 indicators are standardised ratios to provide an "adjusted" rate for the underlying differences in age and sex of the data zone's population, in relation to the Scottish population (Scottish Government, 2016a). Therefore, in all standardised ratios, 100 refers to the Scottish national average for a population of the same age and sex in the data zone, used as a reference point as to whether the measure is high or low. Standardised ratios are critiqued for validity and consequently, should only be used when strictly necessary and based on calculations that are as local as possible (Julious, Nicholl and George, 2001). Many calculations in the SIMD rely on secondary indirect standardisation as a denominator rather than local data, potentially skewing the numbers.

The Education domain measures school pupil attendance, that has changed methodology to only include students who attend school 90% or more of the time, rather than an average of all pupils' attendance (Scottish Government, 2016a). This seems counter-intuitive, as it would be a more useful measure to know the average of all students' attendance rather than the students who do not have attendance issues.

The Geographic Access domain refers to driving and public transit times to services deemed to be necessary or important to everyday life, such as the petrol station, GP surgery, post office, schools and retail centres. The *SIMD16 Technical Report* calculates the time to 6 services for driving and only three for public transportation and places two-thirds of the weight on driving because it is a more robust and consistent measure across Scotland (Scottish Government, 2016a). More deprived individuals will not have a vehicle and therefore public transit times that include walking or buses would be a more appropriate measure, despite its lower weight. Furthermore, the SIMD uses the closest trip to each destination rather than averaging or accounting for any differences in the bus, train or walking routes (Scottish Government, 2016a). This presents a contrast to New Zealand's IMD, which calculates the average distance of the closest 3 services, reflecting research that suggests residents will not always use the closest service or facility for a variety of reasons (Exeter, *et al.*, 2017).

The Crime domain measures specific crimes that have consistent data availability and are felt to be most relevant to local neighbourhoods (Scottish Government, 2006). The SIMD relies on the Police Scotland figures from 2014-2015, which carries the risk of underreporting in crime, a consistent issue with police-generated statistics. The *SIMD16 Technical Report* also notes there may be bias in data zones located within city centres or sporting events facilities, that can create temporary increases in crime (Scottish Government, 2016a). The location of the police station seems to be more determinant of reporting than the post code of the offender that reveals information about the neighbourhood but neglects the experiences of multiple deprivation on the residents of the data zone.

The Housing domain measures overcrowding and households without central heating, which neglects other important aspects of housing such as the quality or availability of affordable housing that are located in other countries' IMDs. For example, the English IMD's Indoor Living Environment domain is comprised of indicators measuring the housing conditions, overcrowding, housing affordability and homelessness which demonstrates more comprehensive indicators than the SIMD's Housing domain (Smith *et al.*, 2015). The *SIMD16 Technical Report* overcrowding measure based on occupancy, is openly criticised as an unsophisticated measure that generally overstates numbers (Scottish Government, 2016a). Other measures of overcrowding such as the "bedroom standard" may be more accurate

measures of overcrowding. Choosing the lack of central heating as an indicator seems an inappropriate measure for the Housing domain, as residents may not prioritise that indicator or have the capacity for heating which they may not utilise because it is unaffordable. That being said, there are only 2.3% of households in Scotland's 2011 Census that reported living without central heating, compared to the 5% average in Mount Florida (Office for National Statistics, 2011b).

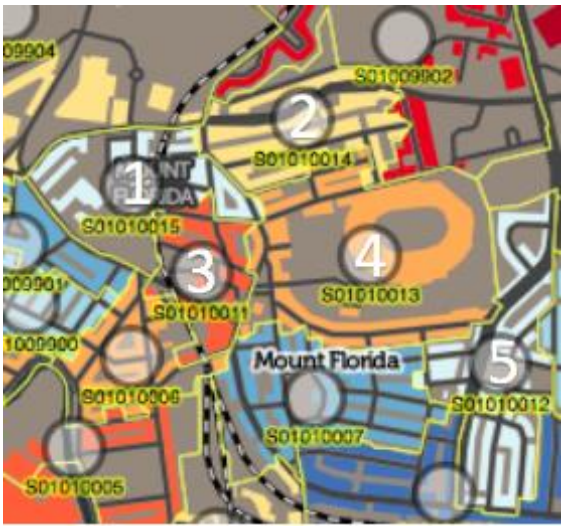
CHAPTER 3: CASE STUDY

3.1 MOUNT FLORIDA

The highlighted blue area demonstrates where Mount Florida is located in relation to Glasgow city centre.

The intermediate zone of Mount Florida, comprised of 5 data zones, will be examined to exemplify the SIMD's short-comings and how qualitative data is able to interact with quantitative data for a more in-depth picture of an area. Scottish intermediate zones are algorithmically defined in an attempt to recognize neighbourhoods, based on socio-economic characteristics. The intermediate zone was chosen because it best aligns with the jurisdictions of the Mount Florida Community Council, an important resource in this study. Moreover, the intermediate zone is advantageous with relatively stable jurisdictions, which are less volatile than data zone boundaries. The following section outlines the qualitative and quantitative data obtained about Mount Florida, which will be compared against the SIMD findings.

Demographics



Data Zone	SIMD16 Rank
01	3985
02	2968
03	1634
04	2522
05	3880

A map of the Mount Florida intermediate zone, consisting of 5 data zones that are labelled 1 through 5. The darker orange colours indicate more deprivation and the lighter blue colour represents less deprivation. The table shows the SIMD data zone ranks. A table with the domain indicator scores is in Appendix B.

The population of Mount Florida is 4,336 based on the 2016 SIMD. Mount Florida is primarily composed of residents between the ages of 25 and 40. When this age group chooses to settle in an area, it provides economic viability to a neighbourhood and the potential indication of future prosperity according to a Glasgow City Council bureaucrat (Arnott, 2018). However, age structures are not necessarily linked to current or future neighbourhood deprivation. Scottish Government statistics reveal there is a general trend of population growth in Data Zones 2 and 3, by 47 residents and 58 residents respectively, between 2011 and 2016 (Scottish Government, 2017b). Data Zone 3 is of particular interest, with a large concentration of residents aged 30-34 and more relative deprivation compared to the other data zones. Data Zone 3's growth should be closely watched and may potentially be accompanied by greater resource allocation to ensure there are sufficient provisions.

History

Mount Florida is described as an average area in Glasgow's southside, that is not of particular concern to the Glasgow City Council (Arnott, 2018). Mount Florida's history as a residential area indicates it has never been an extremely deprived neighbourhood, echoing Charles Booth's findings that neighbourhoods tend to maintain their relative deprivation (Orford *et al.,* 2002). Its history implies various Scottish housing policies over the years from differing

political parties, have helped shape the current demographic and housing composition. Arguably, the most influential policy was the Glaswegian clearance of people from the city centre to the outskirt neighbourhoods that were largely neglected by city planners, in order to modernise the city centre (Pacione, 1995). The large-scale move, in combination with a lack of expenditure to the outskirts, resulted in overcrowding and social problems throughout the 1980s and 1990s (Pacione, 1995). Mount Florida was spared many of these problems, as a pre-existing residential area, however these past housing policies affected some of the surrounding areas such as Govanhill and Castlemilk which are renowned for social problems and recent regeneration efforts.

In attempt to solve these housing issues, politicians have implemented various programs to increase owner-occupation and combat the increasing amounts of council housing, where many social problems occur (Atikinson and Kintrea, 2000). Regardless of the policies' success on affecting housing conditions, they have arguably impacted Mount Florida, through unusually high percentages of owner-occupied homes. The areas with the most social problems were not greatly improved by this program and have become the recent focus of the Glasgow City Council, the LA, through alternative methods of reform. In comparison to these areas, the Mount Florida Community Councillors depict Mount Florida as too affluent to receive serious funding from their LA, but not affluent enough to fundraise all the money needed for the projects that they want to complete.

Community Council

The Mount Florida Community Council as representatives of the community, were key informants for qualitative data in this case study. The current Council is composed of a mixed demographic, with various professional skill sets. Yet, the Council recognises that they are not a representative sample of the overall population. They skew toward working age, middle-class professionals and do not often hear from lower-income households. The Council works with small pots of funding to complete discrete projects to improve the community (Thomson, 2018). For example, renting washroom facilities to place around Hampden stadium to deal with public urination or the enhancement of green space. It was felt that in comparison to other Community Councils, Mount Florida has a more active online presence that allows farther outreach and multiple methods of participation. Moreover, it was indicated by residents that the role of Chair has a decisive impact on overall activeness of a

Council and the current Chair has increased activity, and the Council's presence in the community as a result.

3.2 METHODOLOGY

The case study on Mount Florida will consist of quantitative data derived from the SIMD, Census and other household demographic data published by the LA, Scottish and UK Governments. The qualitative data is obtained from a focus group and interviews with Community Councillors and a Glasgow City Council bureaucrat, while utilising recent news articles, historical documents and maps for a rich understanding of the community.

Primary research was guided by social science research's key principles of generalizability, reliability and validity (Kvale, 1996). In application to interviews, reliability involves a consistent explanatory opening of the general purpose of the research and the careful avoidance of leading questions, which may influence interviewees answers (Kvale, 1996). Validity was considered in the quality of the interview, receiving clarification and verification on the meaning of interviewees' answers. Interviews were semi-structured with open-ended questions, identical in both interviews, but varying in order so as to maintain conversational flow. Open-ended questions are the best structure for exploratory and in-depth work, allowing the greatest amount of flexibility in responses, however is often a trade-off of analytic rigor (Aberbach and Rockman, 2002).

The focus group was held June 2018 with 5 participants. Focus groups strive for group discussions that allow participants to explore issues through individuals' views and experiences (Kitzinger, 1994) that allows the discovery of unforeseen topics of interest. As an initial pilot, this focus group was not a representative sample of the population's demographics; it is recommended to improve the representation for future research on policymaking in local communities.

Methodology is also borrowed from well-being research that incorporates subjective opinions on a range of variables (Kingdon and Knight, 2003). Well-being research highlights the importance of perceived deprivation, which can contradict the findings of objective deprivation measures, to provide further explanations or points of investigation (Ravallin and

Loskin, 2002). Likewise, research on resilient areas is applied, to examine a variety of material and social variables to explain specific socio-economic outcomes in a community.

3.3 SIMD

The remainder of this chapter will outline the results obtained from the collection of qualitative and quantitative data in relation to the SIMD's major themes.

Weights

The SIMD domain's weights were critiqued by residents, and it was unanimously agreed that the Employment and Income domains were weighted too heavily, whereas the Housing, Education and Health domains should be weighted more. It was acknowledged that weights can make a big impact on the outcome of SIMD results and consequentially have great significance (Arnott, 2018). The domains that appear most important to bureaucratic structures and academia do not seem to reflect local opinions and priorities. The SIMD weights have remained the same since the creation of the original IMD, adjusted only for the addition of the Crime domain in 2004. The methodology for indicators has changed many times, without a subsequent change in weighting structure, which is problematic.

Income

The household characteristics from the *Small Area Income Estimates*, indicate a wide range of income levels (Scottish Government, 2017c). This was substantiated by residents, who stated Mount Florida is a diverse area, but without recognising the inequalities among the community. The least deprived data zone in Mount Florida reveals income deprivation of 1% of the population, compared to the most deprived data zone with 23% (Scottish Government, 2016b).

Crime

The most notable crime in Mount Florida is fly-tipping: discarding rubbish on the street or in lanes, rather than contacting the city authorities to collect it (Carus, 2018). This is a minor crime, however the residents felt that this was a prevalent issue in the neighbourhood that added to feelings of disorder, decreasing the satisfaction with housing and the

neighbourhood generally. The appearance of the community is a determinant of overall satisfaction with a neighbourhoods and feelings of deprivation (Sampson and Raudenbush, 1999). While residents felt that Mount Florida was safe, it was indicated that the bordering neighbourhood of Govanhill has higher rates of physical and sexual violence, thus many avoid the area, despite the convenient location of some services such as the closest bank. The experience of deprivation in a surrounding area is not accounted for in the SIMD.

Health

Generally, Scotland has a problem with alcohol and public intoxication. However, residents felt that Mount Florida was a particularly dry area, with few bars or alcohol retailers. They did not believe there were many instances of public intoxication or fights that are prevalent across Scotland. Events that occur in and around Hampden stadium, are notable exceptions to these findings in the SIMD data and among residents.

Mental health does not seem to be a major conversation among Mount Florida residents, despite the SIMD data revealing a potential issue through prescription of mental health drugs. Data Zone 3 has a prescription rate of 26% among residents (Scottish Government, 2016b). This is a high-rate in a data zone that has predominately working-age residents. This appears to be an undetected issue in the community that may benefit from open conversations.

Other health concerns expressed by residents were not reflected in the SIMD measures. One focus group participant raised the issue of locally produced foods, feeling that the community lacked larger conversations around health foods. Another resident felt that people should be encouraged to walk or bike more to promote their health and to reduce the number of cars in Mount Florida. This reflects a recent Mount Florida Community Council initiative to promote more physical activity. Diet and exercise are not quantitatively measured in the SIMD but are linked to major health problems. There are everyday strategies that may improve residents' health and the Community Council is looking at initiatives to help accomplish this goal.

Access

The SIMD ranks Mount Florida's accessibility as its least deprived domain, indicating short-distances to necessary services by car or public transportation. Residents would generally agree that most shopping and other GP, dentist, or school services are conveniently located. Small businesses dominate the area, some of which are well-established and some storefronts that tend to have higher turnover. However local shops close early, and residents find a lack of food variety that is provided by box stores and specialised shops in neighbouring communities. The introduction of larger stores and more speciality shops may encourage more local shopping in Mount Florida.

The Access domain's public transportation considers walking, buses, trains, and ferries. The varying modes of transportation are not measured separately in the SIMD and the quality of transport is not measured at all. Overall, Mount Florida's public transport is in high-demand despite residents taking issue with buses in the neighbourhood, over their unreliability, expense, infrequency and routes. Fortunately Mount Florida is conveniently located along a trainline that goes into Glasgow city centre. Public transportation was a notable concern for the Community Council, which attempts to foster more social cohesion and worries that the lack of effective public transport leads to social isolation by preventing residents from visiting family and friends (Thomson, 2018).

Housing

Generally, residents reported fairly good quality housing, although some comments did match the SIMD findings of overcrowding and households without central heating. The *Glasgow Housing Strategy 2017-2022* Neighbourhood Profile for Mount Florida recognises the likelihood that pre-1919 tenement housing does not have proper insulation and encourages its improvement (Glasgow City Council, 2017). Residents agreed that older tenements may have poorer conditions, however this was not seen to be as being as problematic as overcrowding. The SIMD indicated overcrowding as one of the biggest problems within Mount Florida, with rates between 11% and 22% across the 5 data zones (Scottish Government, 2016b). Multiple occupation in certain low-income areas was mentioned as well as the difficulty of measuring overcrowding because it is an undetected issue unless there are insistences of complaints or investigations that have led to these

findings (Arnott, 2018). Therefore, there may be a larger number of people residing in overcrowded housing than the indicator shows.

However, there were other problematic aspects of housing in Mount Florida that did not appear in the SIMD, such as housing prices and availability. In relation to the increasing popularity of the neighbourhood these problems may indicate gentrification. Some residents reported increases in housing prices, as the south of Glasgow builds popularity with the working age population, being labelled as the "new west end". One resident anecdotally found while selling her own flat, that housing prices in the area have increased by over 20% in the past 2-3 years. This compares to the increase in Glasgow's average house prices from 2015/16 to 2016/17 at 4.7% (Registers of Scotland, 2017). Residents perceived that this was correlated with an increase in owner-occupiers in the area, from people around the UK looking for an affordable home near a major city (Thomson, 2018).

Also notable in quantitative data was the number of house sales per year, deviating from the steady 90 to 100 houses sold per year. In 2017, Mount Florida sold 138 houses, which could not be accounted for by the Councillors or residents (Scottish Government, 2017a). The turnover rate from the 2011 Census data found that only 3,612 residents lived at the same address as one year ago, out of the total 4,172 population; a high turnover rate of 26% (Office for National Statistics, 2011a). This could indicate that Mount Florida has a transient population, or a demographic turnover based on gentrification.

In 2014, 65.6% of households were owner-occupied in Mount Florida, a very high proportion of households, reflecting the success of previous housing strategies (Glasgow City Council, 2017). Privately rented housing, associated with more transient populations and overcrowding, made up 18.8% of households according to 2011 Census data and increased to 25.8% in 2014 (Office for National Statistics, 2011a). This is close to the Glasgow city average; however, Mount Florida's social renting is 8.6% compared to their average of 36.4% (Glasgow City Council, 2017). There is recommendation from the Glasgow City Council (2017) in the *Glasgow's Housing Strategy 2017-2022* that if sites become available, social housing should be built, but in larger sizes to accommodate bigger families. This would reduce both overcrowding and the potential issue from gentrification of deficient affordable housing in Mount Florida, that is unmeasured in the SIMD.

Comparison

Govanhill was the comparison drawn most frequently by Mount Florida residents, in regard to crime, overcrowding in housing and the amount of ethnic diversity. It tended to minimise residents' perception of a problem because of Govanhill's reputation for "rogue" landlords and other social problems. In response to Govanhill's specific housing problems, it has been designated as an Enhanced Enforcement Area (EEA), which grants the Glasgow City Council additional powers to force landlords to provide documentation around building insurance, safety and criminal record checks (Scottish Housing News, 2017). The recent Govanhill EEA expansion now includes a single street in Mount Florida, where one landlord has been investigated and taken off the landlord registry (Poorman, 2018). While this is indicative of the potential problems that exist in Mount Florida's private-rented housing, the comparison to Govanhill's EEA housing area, demonstrates that the housing situation in Mount Florida is not equivalent to other data zones labelled as housing deprived by the SIMD. Alternatively, while Mount Florida may be among the worst data zones for housing nationally, residents' juxtaposition against Govanhill may by deceiving the community to the extent of the problem. Consequentially, it is difficult to assess whether or not Mount Florida has a problem with housing based on a comparison to Govanhill.

3.3 GREEN SPACE AND SOCIAL CAPITAL

Residents felt that the SIMD should include indicators for gender equality in pay or employment, access to community space and green space, and most commonly, the degree of social cohesion. Measures around adequate green space and social capital were seen as the most important measures missing from the SIMD, hence will be the focus.

Physical Environment

The lack of green space is seen as a barrier to larger outdoor gathering spaces for the community or community events. Green space is desirable for Mount Florida residents to assemble and enjoy, but also as a play space for children. The lack of outdoor or indoor community space and its effect on social cohesion was recalled as one of the biggest issues in the neighbourhood, which has no place for measurement in the SIMD.

Social Capital

The focus group felt that social factors should be included in the SIMD, because they will alter the perception of the neighbourhood and overall happiness. They made links between social connections and loneliness, poverty, health and public transport. Social capital was the chosen framework to further explore these themes in relation to community connections. In accordance with Dobbs (2016), social capital refers to a variety of dimensions such as the integration of residents, sense of community, trust, civic participation and influence in a community. Resilience research also highlights the importance of "place-specific" factors that can influence more positive outcomes in neighbourhoods (Pearson, Pearce and Kingham, 2013, p. 244). These specific factors could include interactions with neighbours, the neighbourhood's history, social networks or a community's level of influence. In Mount Florida, these differences were attributed to having a good factor, neighbours and the Community Council.

Mount Florida's social cohesion was felt to be in pockets or groups, where there is high levels of trust and communication among residents. Residents noted that these pockets of social cohesion appear to be based around geography and common interests. These common interests could be around hobbies, children such as the Parents Partnership, or community groups that run from the church. The focus group pointed out that residents with children or dogs tended to know more of their neighbours than other groups. While there were claims that there is a sense of community in Mount Florida among its residents and there is generally trust, it was also believed that there was room for improvement. It is noted that there are differences between closes in the neighbourhood, some of which organise together to socialise and clean the area while others do not communicate at all and tend to result in more littered environments (Carus, 2018). The active Community Council plays a role in further building these social networks.

Social capital as outlined by Dobbs (2016) also involves civic participation and influence. Residents in the focus group and the Community Council found they had little influence over any decisions at higher levels, expressing great frustration in this sphere. While they have a few key contacts on specific issues, there lacks real and consistent participation between the LA and Mount Florida Community Council, despite a stated *Community Learning and Development 2015-2018* priority to build the capacity of communities and allow their

influence in decision-making (Glasgow City Council, 2015). The Glasgow City Council has a top-down structure and trying to accomplish bottom-up projects is incredibly difficult, which Councillors felt to be frustrating and largely fruitless efforts. The Community Planning Partnerships are meant to be a forum to bring relevant agencies together to fix local issues, to the advantage of local governance, however Councillors feel as though it is solely a mechanism for information and policy to be passed down to lower levels of governance. The Council's difficulties, as knowledgeable and skilled actors in this field, reflects how impossible citizens would find it to influence LA decisions, detracting from social capital in the community.

CHAPTER 4: FINDINGS

4.1 WEIGHTS

The overall weighting structure plays an important role in determining the SIMD ranks. These weights are important can have the ability to alter ranks and consequentially the perceived need in an area (Fenton, 2013). There are various methods that can be employed to determine the weighting structures for an index, such as theory, empirical evidence, group consensus or policy relevance (Northern Ireland Statistics and Research Agency, 2010). The SIMD and the English IMD both use a theory-driven structure based on the original Oxford University academic literature review on poverty and deprivation. The Welsh index does not release data on how the domain weights have been determined, simply stating that it is determined by the domain's importance. Interestingly, the Northern Ireland IMD periodically conducts consultations with IMD users to assess the indicators and weights. Throughout two consultation processes with proposed changes to the weights, it was determined that there was a "lack of sufficient basis" to change the weights, implying the previous academic literature is superior (Northern Ireland Statistics and Research Agency, 2010). The preference for IMD weight structures in the UK, based on literature review appears to be prevalent compared to other methods.

However, the New Zealand index, referred to as the NZDep utilises empirical evidence to determine domain weights, through use of statistical analysis of a domain's correlation to

deprivation. The NZDep uses Spearman's Rank Correlations to determine the weights and found the weakest correlation to the Access domain (Exeter *et al.*, 2017). The weights used in the SIMD and NZDep are consistent apart from NZDep's weight of 2 for Access and 9 for Housing, whereas the SIMD weighs Access with 9 and Housing with 2 (Exeter, *et al.*, 2017). The empirical findings of NZDep's weights are reflective of New Zealand's socio-economic landscape, nonetheless it presents questions around the SIMD weight methodology and a research opportunity to conduct statistical correlation analysis on the SIMD domains.

Furthermore, the choices of SIMD domain themes and indicators are not perfectly aligned with what other countries chose to measure in their IMDs, demonstrating some subjectivity in what Scotland chose to measure in multiple deprivation.

Neither the UK indices' nor NZDep weighted structures consider residents' opinions on priorities. It is apparent that residents have different priorities and measurements of success for their communities, which appear less economically motivated than current multiple deprivation indices that put the most weight on Income and Employment domains. One suggestion produced by the Northern Ireland Government was a survey to determine a list of "socially perceived necessities" that could then undergo Factor Analysis to determine the weights (Northern Ireland Statistics and Research Agency, 2010, p. 4). Citizens are a neglected body of evidence in the construction of academic indices of deprivation, utilised by governments in a variety of policymaking settings.

4.2 MISSING FROM THE SIMD

The SIMD does not provide quantitative data on all the topics that residents found key to multiple deprivation or a thriving community, such as gender equality and loneliness, but the topics most frequently raised revolved around communication between residents, how people enjoy the community and a sense of community. This will be referred to as social capital. The other was adequate access to green space in the neighbourhood for either community gatherings or children's play space. It is difficult to measure social capital and enjoyment of suitable green space quantitatively, which qualitative methods can help overcome. Moreover, academic literature has demonstrated how these two factors can reduce feelings of deprivation in a neighbourhood (Mitchell *et al.*, 2009). These elements are

not conducive to quantitative measurement and consequentially, are absent when decisions are made strictly based on a SIMD ranking.

Social Capital

Social factors were listed as important elements for multiple deprivation, that can affect how residents perceive their neighbourhood. Community Councils have the ability to foster a sense of community, cohesion and improve the general well-being of citizens if they engage actively with the community (Prager and Holstead, 2016). Mount Florida has a relatively active Community Council whom view their role as facilitators of social cohesion, more so than the role that the Scottish government determined, as communicators between the community and higher levels of government. A Community Councillor reported that social cohesion should be a major responsibility of the Council, bringing together residents to build social connections and reduce loneliness (Thomson, 2018).

Indicators to measure social capital elements quantitatively are very poor. For example, loneliness has few direct or indirect indicators, however survey research has demonstrated a high-number of lonely people in the UK, particularly in pensioners (Campaign to End Loneliness, 2016). The Campaign to End Loneliness (2016) report recognises the multi-dimensional nature of loneliness and recommends utilising available data in combination with local communities' intelligence in order to identify and support people experiencing loneliness in the community. Other aspects of social capital are also best captured with a mix of quantitative data and qualitatively by speaking to the local community. By speaking to residents, it was ascertained that Mount Florida does have pockets of social cohesion and social connections that could not be discovered by quantitative measures.

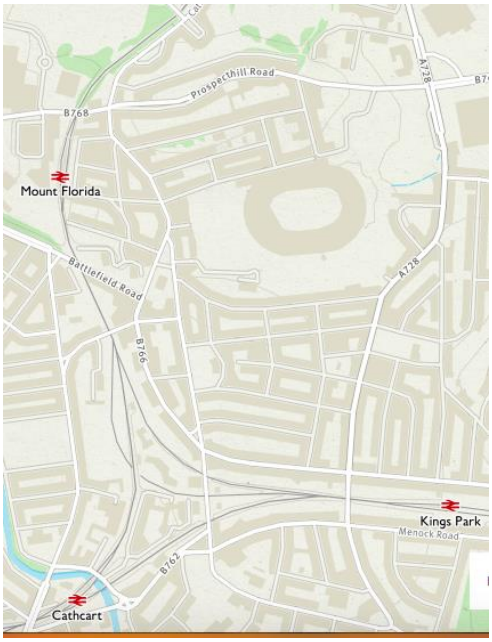
Literature around resilient areas found that higher levels of social cohesion and interconnectedness, can positively impact residents and their perception of a neighbourhood (Kingdon and Knight, 2003, cited in Helliwell, 2002). A social environment and support from local Community Councils can allow even the most deprived neighbourhoods to appear vibrant and thriving (Mitchell *et al.*, 2009). Mitchell *et al.*'s (2009) qualitative interviews on resilience finds a strong correlation between community cohesion and improved social and health outcomes in a neighbourhood. While the study found that there were sometimes gaps between perceptions of interviewees and quantitative characteristics that were difficult to

assess, the ability for social capital and the physical environment to affect their subjects' perceptions of the neighbourhood, is an interesting finding in and of itself.

Physical Environment

The Scottish SIMD is the only IMD in the UK that does not include a measure for the physical environment. Other UK IMD's indicators include road safety, air pollutants, flood risks and proximity to waste or industrial sites.

The amount of green space in Mount Florida shown on the map below, demonstrates the lack of green space available to the community. One resident said there is green space along Cathcart road, a busy street in Mount Florida that travels to Glasgow city centre and therefore, is not conducive to events, play space or general use for residents (Thomson, 2018). There is a general consensus among residents that there is not an adequate amount of green space and the small amount available could be more effectively utilised. The Community Council is currently working on a project, based on LA funding, to transform a triangle of unused space into public green space. It is recognized as a worthy initiative by the LA whom has increasingly small discretionary funding for Community Council's (Scottish Government, 2013), however it is not considered within the SIMD.



In regard to the aesthetics of the neighbourhood, residents felt that litter, in the form of fly-tipping, garbage and dog droppings, were prevalent problems. This was a sentiment repeated by many residents which may denote Mount Florida as an average to affluent neighbourhood, insomuch that litter is listed as one of the neighbourhood's big problems rather than more serious social issues. Indicators around physical cleanliness are not measured in the SIMD, implying it is not important to multiple deprivation, however from a subjective well-being viewpoint, the appearance of the neighbourhood will affect residents daily. Qualitative resilience research reported that the physical environment and amount of green space was important to making a community feel less deprived (Mitchell *et al.*, 2009).

Moreover, it has the potential to change perspectives on the neighbourhood and can encourage a greater sense of community (Dobbs, 2016). The Glasgow City Council is responsible for street cleaning and in the context of restrained funding from the Scottish Government to Local Authorities, this may not have the same priority as residents do.

4.3 DISCREPANCIES

The qualitative data findings obtained from Mount Florida, uncovered discrepancies between the data in the SIMD and lived experiences in the structure of the SIMD and individual indicators. These differences were most notable around the two domains that the SIMD identified Mount Florida to be the most and least deprived in: Housing and Access. However, there were other discrepancies in Crime and Health. This demonstrates how objective quantitative measures can stand in opposition to the subjective perceptions of lived experiences, highlighting the necessity of mixed-methods approaches for small-areas. While these discrepancies around Housing and Access may be particular to the SIMD, it is a generalisable finding that there will be discrepancies between the quantitative findings in the SIMD and residents' perceptions. These points of contention can lead to further avenues of inquiry, for governments and academia, and add to the determination of important measures of deprivation for future policymaking.

Access

The low deprivation scores in the Access domain are one of the biggest points of incongruency with local residents. Affluence in the Access domain indicates that all necessary shopping and services are nearby, with efficient travel methods. However, residents felt there were missing services and the quality of public transport is not reflected in the SIMD. For example, the SIMD does not deem banks as a necessary service, which one resident felt was particularly important. The SIMD combines the average of all applicable public transport, whether it is buses, trains, ferries and walking (Scottish Government, 2016a), which may skew the differences in the quality of public transportation. Transportation is a major factor in deprivation; the ability to reach the city centre affordability is a significant consideration for any resident in regard to housing and employment. Additionally, greater weight should be

assigned to the efficiency of public transportation rather than driving times, in a measure of deprivation. These are both oversights in the construction of the SIMD.

The SIMD does not reflect the quality of local shops and difficulties that may be associated with healthy eating. Access to healthy foods contributes to the community's overall health, which is not thoroughly examined by the Health domain indicators, predominantly measuring hospitalisation incidents. It is generally found that access to food at affordable prices is a barrier to healthy eating in disadvantaged communities (Cummins *et al.*, 2010). An unhealthy diet will also contribute to the pressures on Scotland's NHS and public services (Scottish Government, 2018). Notably in the Scottish context, where rates of obese and overweight citizens rank among the highest in the developed world (Scottish Government, 2018).

In recognition that healthy foods should be available locally, the Scottish Government began the *Scottish Grocers Federation Healthy Living Programme* in 2004, to encourage stocking more fruits and vegetables (Scottish Government, 2014). The Programme specifically targets convenience stores because they are an easy source of healthy food within local communities, that are accessible to lower income residents. This initiative was adopted after research demonstrated that medium and large stores have the best prices and variety of healthy foods (Cummins *et al.*, 2010). Deprived individuals may not always have access to these stores unless they are located in their area, whereas convenience stores are found in every local community. While Mount Florida may not be considered deprived, contrarily being deemed affluent in its accessibility, bur residents noted that there were only small local shops for food and that many residents shopped in another area with larger stores. The SIMD does not consider healthy eating or quality of stores in its Access domain score, which could potentially affect the health of citizens if this dimension is not considered within deprivation.

Housing

An opposing discrepancy is the Housing domain, where the SIMD identified deprivation, however this does not match the perception of residents. Housing is meant to be the domain where Mount Florida is most deprived, indicated by two of five data zones ranks in the lowest deciles of housing in Scotland. However, these indicators may not reflect the main concerns felt by residents around housing or miss what the community deems as the most prevalent and important issues. While there was recognition from citizens that overcrowding

and a lack of insulation exists in some households, it was not spoken about with the same passion as other issues.

Social capital is often correlated with housing, both of which are potentially being affected by the first waves of gentrification. Mount Florida residents feel their population is more transient now than in the past, corroborated by the neighbourhood's fairly high turnover in residents. While there is not an explanation as to why some streets are more social than others, it was indicated that there is a link between tenement style in the area, social cohesion and deprivation. Private renters are seen by the population as a more transient and lack socialisation in the community in contrast to a more socially cohesive and stable population of older residents, consistent with social capital research (Dobbs, 2016). Quantitative research also determined that private renting is increasing in Mount Florida. However, residents found that people are moving to Mount Florida in order to a buy a house and settle-down. These two findings seem to be at odds with one another.

There is contradiction between residents' perceptions of first wave gentrification in Mount Florida against quantitative evidence. Indicators of modern third-wave gentrification include government-led investment in infrastructure or the built environment, accompanied by a change in the residents, to individuals of a higher socio-economic status (Rossi, 2015). Although subjective, gentrification is also distinguished by change in the character of the neighbourhood (Rossi, 2015). While this latter element is perceived by Mount Florida residents and there is an increase in housing prices above the norm for Glasgow, there has been little by means of reinvestment in the community to mark the change. Other literature associated gentrification with increases in owner occupation (Hochstenbach and Musterd, 2018), which residents perceived to be true, contrary to quantitative data.

The delay in published statistics could be hiding the beginnings of gentrification in Mount Florida, emphasising the need for local perceptions to track changes and trends. Negative effects of gentrification can then be considered for future planning, such as lower-income residents' obligatory need to spend more money on rent, that could potentially lead to displacement from the neighbourhood. Displacement of residents is a common feature of gentrification, also contributing to the change in the social fabric of the community (Rossi,

2015). As a result, strategies to allow lower income individuals to stay in the community, such as increased social or affordable housing, should be considered.

Transportation and litter were noted as the biggest problems in the community rather than Housing, neither of which are accounted for in the SIMD which begs the question of whether or not the SIMD is able to capture what is valuable to a community in regard to deprivation, based on discrepancies such as Access and Housing.

4.4 COMPARISON

While discrepancies can result from inappropriate or missing measures of the SIMD, disagreement could likewise stem from implicit comparisons to other neighbourhoods. Residents of Mount Florida may not have felt that housing is a significant issue because of the frequently cited comparison to Govanhill, which is a special enforcement area for housing and has repeatedly been cited in the news as a problemed area. This demonstrates a strength of the SIMD, in its ability to correctly identify areas that are experiencing overall higher levels of deprivation. Govanhill's SIMD ranks range from 275 to 1,654, and a median of 677 in its 7 data zones. The table in Appendix C reveals the differences in Mount Florida and Govanhill's SIMD ranks.

The many comparisons drawn between Mount Florida and Govanhill were typically made in order to exemplify a positive attribute about Mount Florida, that likely increased the favourability of residents' perception of their neighbourhood. This effect is backed up by literature that finds individuals' subjective well-being is affected by making comparisons to neighbours (Kingdon and Knight, 2003).

The SIMD currently lacks any consideration of how the deprivation in surrounding areas will affect experiences of residents in other data zones. Spatial auto-correlation research examines how the concentration of a socio-economic characteristic can influence a community (Sridharan *et al.*, 2007). While the research is limited, the Sridharan *et al.* (2007) studied the "Scottish effect", meant to explain why Scotland's health outcomes are worse than England or Wales' even when controlling for area deprivation. Although Scotland is recognised as having higher levels of deprivation. They hypothesise a geographical theory

explanation, that people and places in a neighbourhood influence one another, recognising that an area's deprivation cannot be examined in isolation, but that neighbouring areas will also influence residents' health outcomes (Sridharan *et al.*, 2007). These findings are consistent with other research that spatial factors will impact social and health characteristics as much as the factors of the internal neighbourhood (Sridharan *et al.*, 2007). There is still a general lack of understanding as to why surrounding neighbourhoods can have such a large impact, but it is apparent that bordering areas will affect socio-economic outcomes and subjective perceptions.

CHAPTER 5: CONCLUSION

5.1 KEY POINTS

There are three main takeaway points from this research:

1. The use of multiple deprivation indices in policymaking or funding allocation has many limitations, which can be mitigated through a mixed-methods approach.
2. When gathering evidence, the utilisation of local knowledge and experience to identify problems and opportunities is of great value, despite its underapplication in policymaking.
3. Discrepancies between quantitative and qualitative data must be considered and provide avenues of future research.

5.2 RECOMMENDATIONS

Overall these research findings are applicable to all levels of governance, from Community Councils to national policymaking schemes. The recommendations for further consideration will be divided by level of government, based on their goals and relation to the SIMD.

Recommendations for the Scottish Government for the SIMD:

Through a mixed-methods approach, review the SIMD methodology and incorporate localised views of citizens' priorities for weighting structures and indicators. The SIMD can be a crude measure however, it can reveal new insights and an objective measurement compared to residents' perceptions which may contain biases or inaccuracies. Nonetheless, it is important to take-up the issues that the community perceives as a problem, which will vary and not always perfectly align with national or LA initiatives and priorities but can help create new targets or indicators.

Create domains for physical environment/access to green space and indicators around social capital. The SIMD can utilise the indicators and methodology adopted by the other IMDs for these measures. Social capital may only be ascertained through qualitative evidence.

Recommendations for Community Councils to improve policymaking and enhance community empowerment:

Discrepancies between the SIMD scores and local perspectives indicate that Community Councils should seek a variety of methods to ascertain residents' opinions and primary concerns. Obtaining evidence from a wide-variety of sources reduces this risk and provides more comprehensive insights into community needs and opportunities. The Scottish Community Development Centre (n. d.) *Action Research by, in and for Communities: A practical guide to community-led action research* has an excellent guide of methods to obtain local knowledge, including focus groups, surveys, consultative events, online polls, social media outreach, story dialogue, community events, or interviews with key stakeholders in the community. For inclusivity, a Youth Committee or drawings for children and specific outreach to housing complexes of lower-income residents could be explored.

Strategically adopt the initiatives the Scottish Government and Local Authority are prioritising. Notably the focuses in the mandatory LA's Community Planning Partnership strategies (Scottish Government, 2012). This information can be utilised

to increase the likelihood of support and receiving funding. Improved communication between the Community Council and their LA should enhance the Community Councils' ability to accomplish projects.

Consider other strategies such as community-led action research or a local multiple deprivation measure based on community-identified priorities that can be used in conjunction with other research. Involving communities increases likelihood of identifying community assets and the long-term sustainability of programmes. Additional training for Councillors can enhance a Community Council's capacities to complete this research.

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APPENDIX A

SIMD16 Methodology, is available at: https://www.gov.scot/Resource/0050/00504766.pdf

Domain	Indicators
Income	Percentage of people claiming income benefits/credits, determined through the Universal Credit system • Number of adults (aged 16-59) receiving Income Support or Income-based Employment and Support Allowance and adults (all ages) receiving Jobseeker's Allowance • Number of adults (aged 60 plus) receiving Guaranteed Pension Credit • Number of children (0-15) dependent on recipient of Income Support, Jobseeker's Allowance or Employment and Support Allowance • Number of adults (not paid in employment) receiving Universal Credit • Number of adults and children in Tax Credit families on low incomes
Health	Comparative Illness Factor • Count of total number of people receiving one or more of Disabled Living Allowance, Attendance Allowance, Incapacity Benefit, Employment Support Allowance and Severe Disablement Allowance
	• Hospital stays related to alcohol misuse
	• Hospital stays related to drug misuse
	• Emergency stays in hospital
	• Standardised mortality ratio
	• Proportion of population prescribed drugs for anxiety, depression or psychosis
	• Proportion of live singleton births of low birth weight (less than 2,500 grams)
Access	• Average drive time to petrol station, GP surgery, a post office, primary school, secondary school, retail centre
	Public transport travel time to a GP surgery, post office, retail centre • Public transportation: bus, train, underground, ferries and/or walking
Employment	Percentage of working age people who are employment deprived and receive certain benefits • working age unemployment claimant count averaged over 12 months • working age Incapacity Benefit recipients or Employment and Support Allowance recipients

	• working age Severe Disablement Allowance recipients
Education	School pupil attendance • Percentage of pupils who attend school 90% or more of the time
	• Attainment of school leavers when pupils leave school
	• Working age people (25-64) without qualifications
	• Proportion of people aged 16-19 not in full-time education, employment or training
	• Proportion of 17-21 year olds entering higher education (a first-degree course)
Crime	• Recorded crimes of violence, sexual offences, domestic housebreaking, vandalism, drug offences and common assault per 10,000 people
Housing	Percentage of people living in households that are overcrowded • Occupancy rating: the number of rooms in the house in comparison to the actual number of people
	Percentage of people living in households without central heating • If some or all rooms; central heating includes gas, oil or solid fuel, storage heaters or solar heating

APPENDIX B

Mount Florida SIMD ranks:

Data Zone	Data Zone Label	SIMD16 Rank	Decile	Employment Domain Rank	Income Domain Rank	Education Domain Rank	Health Domain Rank	Access Domain Rank	Crime Domain Rank	Housing Domain Rank
S01010015	01	3985	6	3,582	3,892	3,702	3,688	6,948	1,789	590
S01010014	02	2968	5	2,651	2,434	3,790	2,853	6,696	2,687	622
S01010011	03	1634	3	1,585	1,101	2,703	1,171	6,672	4,091	938
S01010013	04	2522	4	2,415	2,176	3,971	2,174	6,676	1,161	756
S01010012	05	3880	6	3,149	3,456	3,755	3,827	5,353	3,658	3,098

From SIMD16 ranks and domain ranks data set, available at: https://www.gov.scot/Topics/Statistics/SIMD.

SIMD Map is available at: http://simd.scot/2016/#/simd2016/BTTTTTT/14/-4.2452/55.8225/

APPENDIX C

Mount Florida Data Zone	Mount Florida SIMD Rank	Govanhill West Data Zone	Govanhill West Rank
S01010011	1,634	S01009887	449
S01010012	3,880	S01009888	677
S01010013	2,522	S01009889	1,243
S01010014	2,968	S01009890	771
S01010015	3,985	S01009891	1,654
		S01009892	275
		S01009893	630

From SIMD16 ranks and domain ranks data set, available at:
https://www.gov.scot/Topics/Statistics/SIMD.