Human Security: A Lens for Canadian Socioeconomic Policy

Fabrice Blais-Savoie

2025-04-09

IP632: Politics of Human Security

Introduction

As the 2025 Canadian election takes place, cost of living remains the number one priority for Canadian citizens.[1] This concern is exacerbated by the looming instability and inflation caused by the tariff threats of President Donald Trump. These concerns reinvigorate questions linked to human security's "freedom from want" pillar, most precisely its socioeconomic security aspect. The importance of a human approach is also bolstered by the rise in prominence given to "classic" security concerns concerning China and Russia, especially in the Arctic, as seen by the European rearmament drive[2] as well as the shift in rhetoric and ever-increasing defense spending in the United States.[3] These two factors re-emphasize the value of applying a human security lens to the Global North. To inform the current debate, this paper will attempt to study the link between human security-like rhetoric and socioeconomic policy outcomes by utilizing a "word mover distance" approach on budget speeches between 2000 and 2019 and Statistics Canada's Quality of Life indicators. The analysis had a dual output: first it identified that the human security lens is compatibility with Canadian political analysis, which may be expandable to other Global North contents; and second it quantified the relational link between budget speeches and socioeconomic outcomes.

Context

Human security emerged out of the 1994 UN Development Programme (UNDP) and, among other pillars, established several socioeconomic benchmarks determined to be the minimum for

[1] Lord, "Heading into Election Year, Cost of Living Still Dominates Voter Priorities"; Korzinski, "Liberal Lead Over CPC Increases to Eight Points, but Is Carney's House of Dreams Built on Concrete or Sand?"; Sheppard and Coletto, "What Is Motivating Voting Preferences in Canada?"

[2] "Commission unveils the White Paper for European Defence and the ReArm Europe Plan/Readiness 2030."

[3] McLeary, Gould, and O'Brien, "Trump, Hegseth Promise Record $1 Trillion Pentagon Budget."

basic wellbeing.[4] This concept was championed by Global North countries, most notably

Canada, Norway and Japan.[5] This early and continued championing by the Global North[6] has led

to criticism from colonialism scholars and Global South countries, not necessarily because the

idea is wholly western,[7] but rather because its lens has mostly, maybe solely, been applied to the

Global South.[8] Compounding this issue, attempts to apply it to the Global North have focused

heavily on indigenous issues,[9] further marginalizing these communities by fractioning them from

society. To account for this, when applying human security to the Global North, especially

within a country, a translation mechanism is required. This is the purpose of the WMD algorithm

(more detail in methodology).

A further flaw of applying this model in Global North countries is the inadequacy of most of the

global indicators for their economy. Even the more modern indicators, such as multidimensional

poverty[10] and the inequality adjusted human development index (IHDI),[11] while providing a

clearer, more accurate picture of human security in the Global South, provide essentially

meaningless results for the Global North. This is because they generally perform to a level where

indicators are either within margins of error of 0, for example the number of individuals making

less than 2.15$ per day in Canada, or where the variation of indicator value is, in practice,

meaningless, for example the difference between 82 and 84 years of life expectancy or 15 and 16

---

[4] UNDP (United Nations Development Programme), "Human Development Report 1994."
[5] Axworthy, "Canada and Human Security"; Bosold and Werthes, "Human Security in Practice: Canadian and Japanese Experiences"; MacLean, "Instituting and Projecting Human Security."
[6] Martin and Owen, "The Second Generation of Human Security."
[7] Xiao, "Human Security in Practice"; Acharya, "Human Security."
[8] Mgbeoji, "The Civilised Self and the Barbaric Other."; Duffield, "Human Security: Linking Development and Security in an Age of Terror."
[9] Calvão et al., "Extractive Industries and Human Security."; Kamrul et al., "Introduction."; Roberts, "Human Security and Global Governance: The Calculated Mismanagement of Life."
[10] World Bank, "Multidimensional Poverty Measure."
[11] United Nations, "Inequality-Adjusted Human Development Index."

years of schooling. This has been slightly alleviated by the most recent UNDP special report on human security, which measured "perceived" (in)security. However, perception indicators are hard to measure and have been shown to frequently diverge from reality.[12] Therefore, to measure human insecurity in the Global North, some level of translation is required. The simplest approach is to use domestic data and indicators. Statistics Canada maintains a "Quality of Life Hub" which mirrors many of the goals of human security, such as prosperity, health, and environment.[13]

Both the data and application gap make the study of human security in the Global North context particularly interesting. The approach of this paper thus attempts to provide an answer to both gaps by linking human security-like rhetoric with human security-like indicators.

Methodology

This paper used a word mover distance algorithm (see Appendix 1) to measure the proximity of language in Canadian budget speeches with language used to define the socioeconomic pillar of human security.

Word Mover Distance

This approach was first introduced by Kusner et al. to measure the similarity between documents for research purposes.[14] The usage of this method for political text analysis was pioneered by Patterson and Pouliot,[15] who applied it to United Nations General Assembly speeches. The

---

[12] Chaparro et al., "Quantifying Perception of Security Through Social Media and Its Relationship with Crime"; Rundmo and Moen, "Risk Perception and Demand for Risk Mitigation in Transport." *somewhat disputed by* Hipp, "Assessing Crime as a Problem."

[13] Statistics Canada, "Infosheet."

[14] Matt Kusner et al., "From Word Embeddings to Document Distances."

[15] Pouliot and Patterson, "Domesticating Wealth Inequality"; Patterson and Pouliot, "Placing Machine Learning into the Hermeneutic Circle."

authors found this method to be accurate despite diplomatic and euphemized speech. They also found that the method was more effective than traditional frequentist approaches at accounting for the evolution of language over time and seeing through political speak. Considering the nearly 20-year period, as well as the multiple governments and even more numerous finance ministers, this second factor was quite important for this specific analysis. This factor also provides a way to translate human security language into Canadian domestic language. The translation distance effectively becomes a constant across the years.

Following Patterson and Pouliot's methodology, the text was first lowercased, then stripped of stop words, such as "the", "a", or "i",[16] and of numbers, and, finally, separated into a dataset of individual words (tokens). The frequency of words from Table 1 in this list of tokens was then computed to determine the term-frequency inverse document frequency (tf-idf; see Appendix 2).[17] Finally, the word mover distance algorithm was run over the list of tokens to determine the proximity of each token to each concept. The output was then multiplied with the tf-idf to obtain a metric which accounts for both the proximity of a word to a concept and the frequency of that word in the dataset. These values were then averaged for each document to provide a value for each year. For example, if the token "income" is very close to the concept "income diversification", and appears once in every document in the dataset, it will have a low WMD value, and a low tf-ifd value, thus, once averaged with the other tokens in the document, will lower the overall distance of this document with human security (see Figure 1).

---

[16] NLTK, 'Stopwords'.

[17] Manning, Raghavan, and Schütze, *Introduction to Information Retrieval*, pp. 118-120; Baeza-Yates and Ribeiro-Neto, *Modern Information Retrieval,* pp. 68-74.

Figure 1. *Computational Pathway from a Word to a Document Distance*
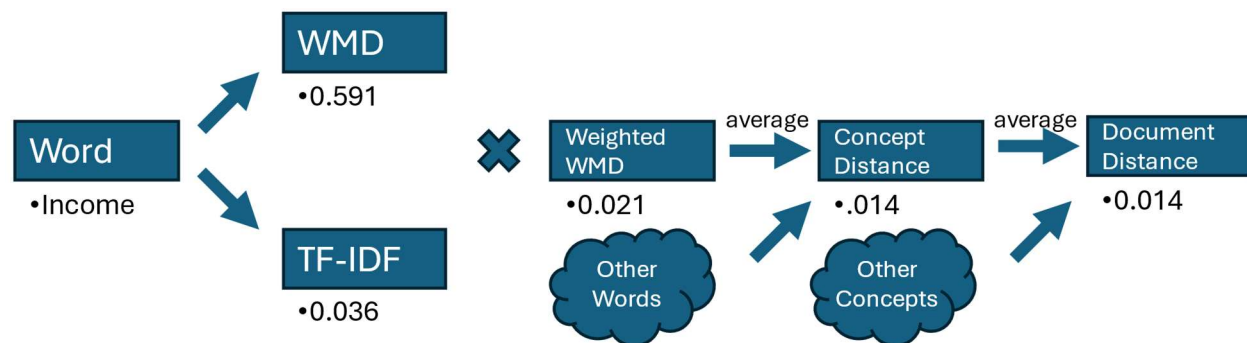
Note: The numbers in this example are based on the values for the word "income", the concept "increased poverty" and the 2015 speech.

To make the analysis more intuitive, the document distance is then inverted. This makes it so a higher number indicates a greater proximity with the concept. The poverty and NEET indicators are also inverted to make the correlation analysis more consistent: higher numbers indicate a greater level of human security.

Data

The Human Security language was selected from two documents, the 2022 UNDP Special Report[18] and the 2017 UN Trust Fund for Human Security handbook.[19] In the first document, the concepts were selected from Table A1.2.1, which constructs the "Index of Perceived Human Insecurity". In the second document, the concepts were selected from Table C, which describes impact of "economic insecurity". Concepts which were too similar were merged (see Table 1). A list of words was also designed from these concepts, to be used for normalization.

---

[18] UNDP (United Nations Development Programme), "2022 Special Report on Human Security."
[19] UN Trust Fund for Human Security, "Human Security Handbook."

The speeches were obtained from the government of Canada's Ministry of Finance database, which compiles budget speeches from 1866 to 2019.[20] The text was then extracted from the PDFs using using Tesseract OCR.[21]

The outcome indicators were obtained from Statistics Canada's Quality of Life Hub.[22] All five "headline indicators" from the prosperity subdomain were selected. These indicators are: median after tax household income, in Canadian dollars (Income); youth not in employment or training (NEET), as a percentage; employment rate (Employment); poverty rate (Poverty); Population Living in Acceptable Housing, as a percentage (Housing). Because of the very limited data on housing, solely 2018 and 2021, the indicator was dismissed. They were then normalized and averaged into one composite indicator, as recommended by the OECD's composite indicator design guidelines.[23] Special attention was given to Poverty and NEET as they had to be inverted to align with the other indicators in the composite (e.g.: poverty going up is bad; employment going up is good). The intersection of this data and the available speeches allows the analysis to be run in the period between 2000 and 2019, inclusively.

[20] Department of Finance., "Budget Speech."
[21] Open Source, "Tesseract."
[22] Statistics Canada, "Quality of Life Hub."
[23] OECD, European Union, and EC-JRC, Handbook on Constructing Composite Indicators.

Table 1. Concepts and Words Used in the Word Mover Algorithm

Concept	Word	Indicator
increased poverty	poverty	poverty
growing unemployment	unemployment	employment
decreased aggregate productivity	productivity	poverty
livelihood options	livelihood	education
income diversification	income	education
need to access education	education	education
expanded skills	trades	employment
no income	income	income
no access to medicine	medicine	income
not enough food to eat	food	education
giving children a good education	education	education
losing or finding job	job	housing
no access to healthcare	healthcare	income

Analysis

The correlation was computed between the WMD, the five Statistics Canada's Quality of Life Hub prosperity indicator and the composite indicator. It was then repeated for a number of shifts, or "lags", as a delay has been shown between both event and government reaction[24] as well as government action and outcomes.[25] The composite indicator was compared to the average distance for all concepts, while the other indicators were compared with the average of the most proximate concepts (see Table 1).

Findings

The first findings can be drawn from observing the data in Figure 2. Most notable, is the consistent decrease for all concepts. The Canadian budget speeches seem to mention human

---

[24] English, Nelson, and Sack, "Interpreting the Significance of the Lagged Interest Rate in Estimated Monetary Policy Rules"; Jovanovski and Muric, "The Phenomenon of Lag in Application of the Measures of Monetary Policy."

[25] De Cesare and Sportelli, "Fiscal Policy Lags and Income Adjustment Processes"; Shinagawa and Tsuzuki, "Policy Lag and Sustained Growth."

security less and less, across the board. It can also be noticed that there is a significant dip in 2014. A cursory look at the speech itself reveals a few possible explanations: it is shorter than the average speeches, at around 10 pages, which means it has fewer words and thus fewer chances to mention the concepts; it is particularly retrospective, this speech was given in the last full year of the third conservative mandate in a row;[26] it is particularly fiscally conservative, diverging from the previous, post recession budgets, and the following Liberal budgets.

Looking at the composite indicator results in Table 2, it can be seen that a lag of minus three years is most significant. The negative coefficient indicates that a change in the human security indicator is followed, three years later, by an inverse change in the prominence of human security in budget speeches. This means that an increase in security would be followed, three years later, by a decrease in discussions of human security concepts. While the opposite is also possible, a decrease in security leading to an increase in budget speeches, the visualization in Figure 2 seems to indicate the first assumption is more accurate.

Looking more closely at the separate indicators, poverty and employment appear particularly interesting. Poverty sees a significant inversely proportional increase in discussion of similar concepts three years following a change in poverty data. This is in line with the results for the composite indicator. Poverty is also the only indicator which shows a correlation for a positive lag. The positive coefficient indicates that a higher emphasis on human security concepts is linked with a future decrease in poverty (or vice-versa). Conversely, Employment displaying a positive coefficient goes against the previous findings. This indicates that an increased level of employment is followed by an increase in discussions of employment in the budget speeches.

---

[26] Andrew Heard, "Canadian Election Results: 1867-2021."

This may indicate the government is engaging is self-congratulatory behaviour (more in *policy relevance*).

Income is heavily correlated with the usage of human security language, which has two most likely reasons: 1) there are essentially no links between the two and the high correlation is a factor of the small dataset and low variance or 2) income has continuously become a more important topic in political rhetoric, while also consistently increasing. Observing Figure 2 suggests that a combination of both is likely: the income indicator has increased consistently over time, with very little year-to-year variance. This limits the ability to draw conclusions from the analysis.

NEET shows no significant correlation which may indicate that the concepts fail to capture education. However, in the case of Canada, federalism is a more likely explanation. Education falls squarely within the jurisdiction of provinces, and, therefore, would likely be discussed very little in federal budget speeches

Figure 2. *Visualization of Human Security Timeseries*
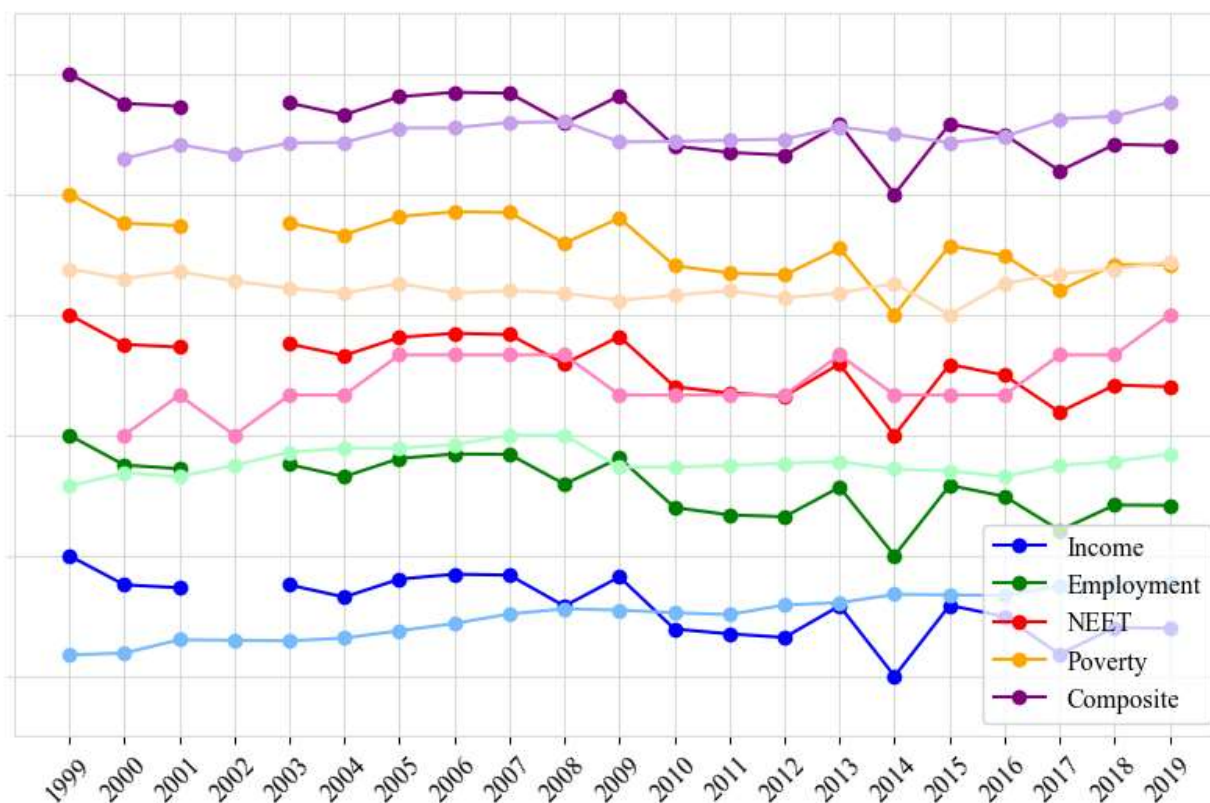
Note: Light colours are indicator series; dark colours are human security proximity series

Table 2. *Correlation Analysis Results*

| Lag | Poverty | | Income | | Employment | |
---	Coefficient	p	Coefficient	p	Coefficient	p
-3	-.473	.035*	-.732	<.001***	.461	.041*
-2	-.267	.256	-.641	.002**	.325	.162
-1	-.053	.825	-.664	.001**	.298	.202
0	-.050	.834	-.713	<.001***	.153	.520
1	.181	.445	-.691	<.001***	.057	.812
2	.573	.008**	-.742	<.001***	-.156	.510
3	.399	.082	-.739	<.001***	-.328	.159

| Lag | NEET | | Composite Indicator | |
---	Coefficient	p	Coefficient	p
-3	-.150	.527	-.469	.037*
-2	-.039	.870	-.353	.127
-1	-.157	.507	-.299	.201
0	-.039	.874	-.239	.324
1	-.111	.661	-.167	.509
2	.134	.609	.025	.924
3	-.205	.429	-.351	.168

*<0.05 ** <0.01 ***<0.001

Policy Relevance

The foremost relevance of this analysis is for academic studies: It identified that human security is a useful lens for studying Canadian politics. This indicates that, despite the criticism, human security is as useful a lens for studying policy response in the Global South as the Global North. It also underlines that the reluctance to apply the human security lens to the Global North is likely a consequence of political unwillingness, and academic bias, rather than incompatibility.

From policy perspective, these results are relevant in two ways: they quantify the lag between policy discussions in budget speeches and outcomes; and they identify that budget speeches mostly are retrospective than prospective.

The first point is particularly useful for policymakers as it emphasizes the need to act early during socioeconomic turmoil to minimize the consequences. In this analysis, it is uniquely visible in the poverty indicator. Nevertheless, the identification of a two-year lag between budget promises and improvements is notable, especially as most of the previous quantitative studies on policy lag have focused on monetary policy. These findings provide new evidence that fiscal policy may also be lagged.

The second point is most relevant to policy analysts, particularly outside of the government. The analysis suggest that budget speeches are, in aggregate, a mediocre way to analyze policy promises. The results indicate that the level of emphasis put on socioeconomic issues in a budget speech is not significantly correlated with future policy outcomes. However, the budget speeches appear to be an accurate rendition of the government's previous performance. Further analysis would be required to assess whether this is intrinsic to budget speeches, because of poor policy design or implementation or because low follow-through on promises.

Conclusion and Policy Recommendations

In summary, these findings indicate that human security is a sensible lens for studying the socioeconomic security of Canadians. It also shows that budget speeches are a useful tool, not for predicting policy, but for obtaining a portrait of a government's self assessment of its performance on socioeconomic issues. These findings also indicate that this self assessment is mostly accurate. The analysis also supports the idea that the language human security is fading. There are, however, a few weaknesses to this analysis: it does not measure the direction of change, that is to say it does not conclusively determine if an increase in indicators leads to an increase in discussion, or the inverse; its dataset is relatively limited, mostly by the lack of indicator data, because of the considerable delay between policy and events, three years isa tenth of the timeseries, this greatly hinders the analysis.

Nevertheless, based on the findings, it is recommended that:

1. Academics further explore the analytical potential of the human security lens on the Global North, beyond indigenous issues; and

2. Canadian policymakers further explore and explain the three year lag between poverty discussions and policies.

Appendix 1

The word mover distance method used in this paper relies on data associated with a relatively small machine learning language model. In 2012, Google trained a model on about 300 billion words of its Google News repository,[27] to, most simply put, compute the "meaning" of a word into a 300-dimensional vector. In practice, this leads to a table akin to Table 3, but with 300 columns. These vectors can also be represented as points in 300-dimensional space (see Figure 3 for an example in two-dimensional space). From these locations, the distance between words can be computed using relatively simple vector math which makes the algorithm quite fast (see Figure 3 and **Table 4**. *Euclidian Distance Between Vectors Based on the Examples in Table 3*Table 4).

Table 3. *Example Vector Components*

Word	Fruitiness	Warmth	Redness	Homeliness
Apple	0.8	0.7	0.8	0.1
Kiwi	0.8	0.9	0.3	0.1
Tomato	0.5	0.6	0.9	0.4
Apartment	0.1	0.4	0.2	0.9

---

[27] https://huggingface.co/fse/word2vec-google-news-300

Figure 3. *Visualization of Euclidean Distance Based on Table 3 Examples, in Two-Dimensions*
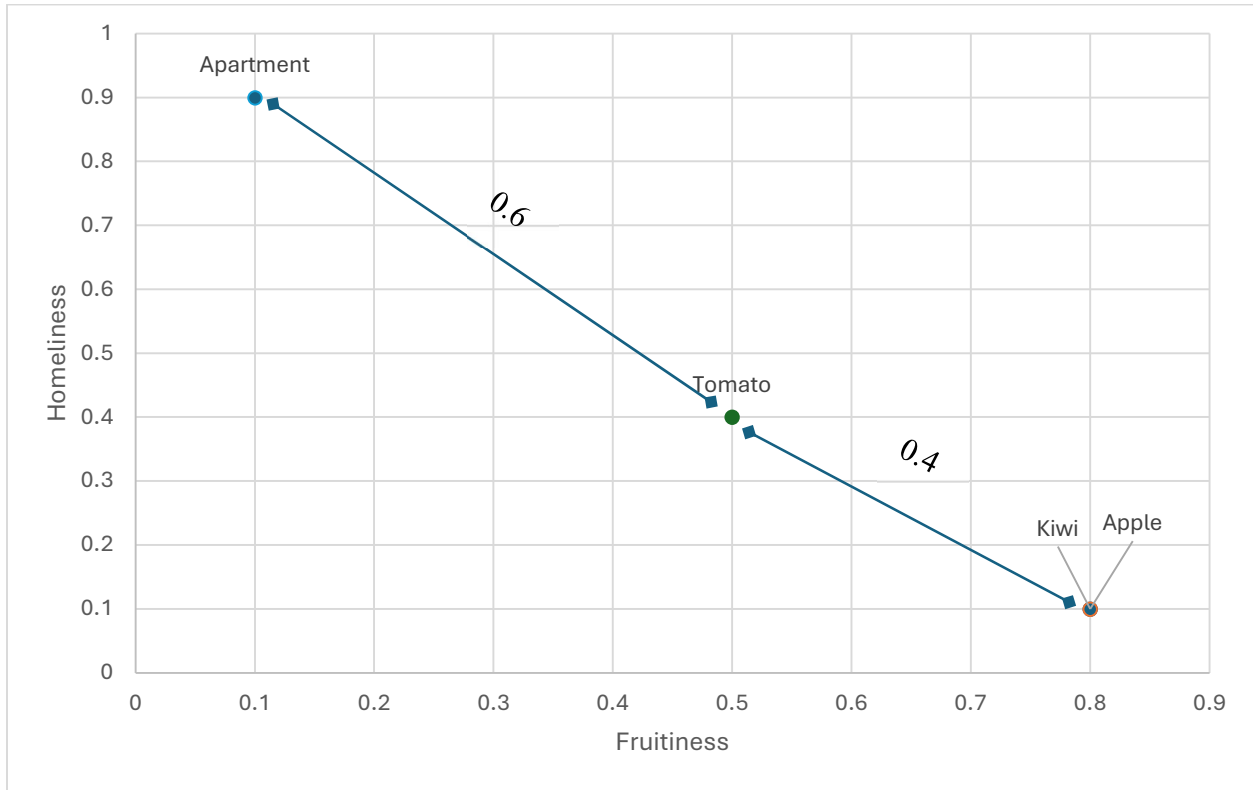
Distance between each word can then be computed with simple vector computation. In this example, *apple* and *kiwi* would be closer each other and further from *tomato*, while being closer to *tomato* than *apartment*.

Table 4. *Euclidian Distance Between Vectors Based on the Examples in Table 3*

Word	Apple	Kiwi	Tomato	Apartment
Apple	-	0.54	0.45	1.26
Kiwi	0.54	-	0.79	1.18
Tomato	0.45	0.79	-	0.97
Apartment	1.26	1.18	0.97	-

Appendix 2. Term Frequency-Inverse Document Frequency

Term Frequency-Inverse Document Frequency (tf-idf), as the name implies, refers to the frequency of a term, within a document(tf), weighed inversely to its frequency in the set of documents(idf). It is computed using equation 1.

$$\text{tf-idf}_{t,d} = \text{tf}_{t,d} * \text{idf}_d \tag{1}$$

"In other words, tf-idf$_{t,d}$ assigns to term t a weight in document d that is

1. highest when t occurs many times within a small number of documents (thus lending high discriminating power to those documents);
2. lower when the term occurs fewer times in a document, or occurs in many documents (thus offering a less pronounced relevance signal);
3. lowest when the term occurs in virtually all documents."[28]

The concept is particularly useful in document analysis as it provides a way to account for staple terms in the dataset. For example, many of these budget speeches start with a mention of the Queen and frequently repeat "government" and "Canada". Because the aim is to measure substantive changes, overvaluing these terms would skew the analysis. Utilizing tf-idf allows the measurement of unique events, while dismissing background noise in the text.

---

[28] Manning, Raghavan, and Schütze, *Introduction to Information Retrieval,* p. 119.

Work Cited

Acharya, Amitav. 'Human Security: East versus West'. *International Journal* 56, no. 3 (2001): 442. https://doi.org/10.2307/40203577.

Andrew Heard. 'Canadian Election Results: 1867-2021'. Simon Fraser University. Accessed 9 April 2025. https://www.sfu.ca/~aheard/elections/1867-present.html.

Axworthy, Lloyd. 'Canada and Human Security: The Need for Leadership'. *International Journal* 52, no. 2 (1997): 183. https://doi.org/10.2307/40203196.

Baeza-Yates, Ricardo, and Berthier Ribeiro-Neto. *Modern Information Retrieval*. New york: ACM press, 1999. https://web.cs.ucla.edu/~miodrag/cs259-security/baeza-yates99modern.pdf.

Bosold, David, and Sascha Werthes. 'Human Security in Practice: Canadian and Japanese Experiences'. *International Politics and Society* 1 (1 January 2005).

Calvão, Filipe, Christina Ankenbrand, Mirjam A.F. Ros–Tonen, and Michael D. Beevers. 'Extractive Industries and Human Security: An Overview'. *The Extractive Industries and Society* 8, no. 4 (December 2021): 101007. https://doi.org/10.1016/j.exis.2021.101007.

Chaparro, Luisa Fernanda, Cristian Pulido, Jorge Rudas, Jorge Victorino, Ana Maria Reyes, Camilo Estrada, Luz Angela Narvaez, and Francisco Gomez. 'Quantifying Perception of Security Through Social Media and Its Relationship with Crime'. *IEEE Access* 9 (2021): 139201–13. https://doi.org/10.1109/ACCESS.2021.3114675.

De Cesare, Luigi, and Mario Sportelli. 'Fiscal Policy Lags and Income Adjustment Processes'.
Chaos, Solitons & Fractals 45, no. 4 (April 2012): 433–38.
https://doi.org/10.1016/j.chaos.2011.10.013.

Department of Finance. 'Budget Speech'. Government of Canada. Accessed 6 April 2025.
publications.gc.ca/pub?id=9.505912&sl=0.

Duffield, Mark. 'Human Security: Linking Development and Security in an Age of Terror'. In
New Interfaces Between Security and Development: Changing Concepts and Approaches,
edited by Stephan Klingebiel and Deutsches Institut für Entwicklungspolitik. Studies /
Deutsches Institut Für Entwicklungspolitik 13. Bonn: German Development Institute,
2006.

English, William B., William R. Nelson, and Brian P. Sack. 'Interpreting the Significance of the
Lagged Interest Rate in Estimated Monetary Policy Rules'. *Contributions in
Macroeconomics* 3, no. 1 (29 January 2003). https://doi.org/10.2202/1534-6005.1073.

European Commission. 'Commission unveils the White Paper for European Defence and the
ReArm Europe Plan/Readiness 2030'. Text, 18 March 2025.
https://ec.europa.eu/commission/presscorner/detail/en/ip_25_793.

Hipp, John R. 'Assessing Crime as a Problem: The Relationship Between Residents' Perception
of Crime and Official Crime Rates Over 25 Years'. *Crime & Delinquency* 59, no. 4 (June
2013): 616–48. https://doi.org/10.1177/0011128710382264.

Jovanovski, Tihomir, and Mehmed Muric. 'The Phenomenon of Lag in Application of the
Measures of Monetary Policy'. *Economic Research-Ekonomska Istraživanja* 24, no. 2
(January 2011): 154–63. https://doi.org/10.1080/1331677X.2011.11517463.

Kamrul, Hossain, J. Miguel Roncero Martin, Anna Petrétei, and Filip Holienčin. 'Introduction: Indigenous Peoples of the North and Human Security'. In *Understanding the Many Faces of Human Security*, edited by Kamrul Hossain and Anna Petrétei, 1–11. Brill | Nijhoff, 2016. https://doi.org/10.1163/9789004314399_002.

Klingebiel, Stephan and Deutsches Institut für Entwicklungspolitik, eds. *New Interfaces between Security and Development: Changing Concepts and Approaches*. Studies / Deutsches Institut Für Entwicklungspolitik 13. Bonn: German Development Institute, 2006.

Korzinski, David. 'Liberal Lead Over CPC Increases to Eight Points, but Is Carney's House of Dreams Built on Concrete or Sand?' Angus Reid, 24 March 2025. https://angusreid.org/canadian-election-carney-poilievre-trump-liberals-conservatives-ndp-bloc-polling/.

Lord, Craig. 'Heading into Election Year, Cost of Living Still Dominates Voter Priorities'. Global News, 27 December 2024. https://globalnews.ca/news/10932617/2025-election-year-canadian-priorities/.

MacLean, George. 'Instituting and Projecting Human Security: A Canadian Perspective'. *Australian Journal of International Affairs* 54, no. 3 (November 2000): 269–76. https://doi.org/10.1080/713613535.

Manning, Christopher D., Prabhakar Raghavan, and Hinrich Schütze. *Introduction to Information Retrieval*. New York: Cambridge University Press, 2008. https://nlp.stanford.edu/IR-book/pdf/irbookonlinereading.pdf.

Martin, Mary, and Taylor Owen. 'The Second Generation of Human Security: Lessons from the Un and Eu Experience'. *International Affairs* 86, no. 1 (January 2010): 211–24. https://doi.org/10.1111/j.1468-2346.2010.00876.x.

Matt Kusner, Yu Sun, Nicholas Kolkin, and Kilian Weinberger. 'From Word Embeddings to Document Distances'. In *Proceedings of the 32nd International Conference on Machine Learning*, edited by Francis Bach and David Blei, 37:957–66. PMLR, 2015. https://proceedings.mlr.press/v37/kusnerb15.html.

McLeary, Paul, Joe Gould, and Connor O'Brien. 'Trump, Hegseth Promise Record $1 Trillion Pentagon Budget'. *Politico*, 7 April 2025. https://www.politico.com/news/2025/04/07/hegseth-trump-1-trillion-defense-budget-00007147.

Mgbeoji, Ikechi. 'The Civilised Self and the Barbaric Other: Imperial Delusions of Order and the Challenges of Human Security'. In *International Law and the Third World*, 161–76. Routledge-Cavendish, 2008. https://doi.org/10.4324/9780203926512.

NLTK. 'Stopwords'. Accessed 7 April 2025. https://github.com/nltk/nltk_data/blob/gh-pages/packages/corpora/stopwords.zip.

OECD, European Union, and EC-JRC. *Handbook on Constructing Composite Indicators: Methodology and User Guide*. OECD, 2008. https://doi.org/10.1787/9789264043466-en.

Open Source. 'Tesseract'. HTML. 2020. Reprint, tesseract-ocr, 6 April 2025. https://github.com/tesseract-ocr/tessdoc.

Patterson, Scott Robert, and Vincent Pouliot. 'Placing Machine Learning into the Hermeneutic

    Circle: A Combined Computational-Interpretive Method for Text Analysis'. *Journal of*

    International Relations and Development 27, no. 4 (December 2024): 441–66.

    https://doi.org/10.1057/s41268-024-00335-4.

Pouliot, Vincent, and Scott Robert Patterson. 'Domesticating Wealth Inequality'. *Global Studies*

    Quarterly 4, no. 2 (9 April 2024): ksae023. https://doi.org/10.1093/isagsq/ksae023.

Roberts, David. 'Human Security and Global Governance: The Calculated Mismanagement of

    Life.' In *New Perspectives on Human Security.* Sheffield: Greenleaf Publishing, n.d.

Rundmo, Torbj⊘rn, and Bj⊘rg-Elin Moen. 'Risk Perception and Demand for Risk Mitigation

    in Transport: A Comparison of Lay People, Politicians and Experts'. *Journal of Risk*

    Research 9, no. 6 (September 2006): 623–40.

    https://doi.org/10.1080/13669870600813811.

Sheppard, Eddie, and David Coletto. 'What Is Motivating Voting Preferences in Canada?'

    Abacus Data (blog), 5 July 2024. https://abacusdata.ca/what-is-driving-voting-

    preferences-in-canada/.

Shinagawa, Shunsuke, and Eiji Tsuzuki. 'Policy Lag and Sustained Growth'. *Italian Economic*

    Journal 5, no. 3 (October 2019): 403–31. https://doi.org/10.1007/s40797-019-00092-1.

Statistics Canada. 'Infosheet: Quality of Life Framework for Canada', 30 March 2022.

    https://www160.statcan.gc.ca/infosheet-infofiche-eng.htm.

Statistics Canada. 'Quality of Life Hub'. Accessed 6 April 2025.

    https://www160.statcan.gc.ca/index-eng.htm.

UN Trust Fund for Human Security. 'Human Security Handbook', January 2016.

> https://www.un.org/humansecurity/wp-content/uploads/2017/10/h2.pdf.

UNDP (United Nations Development Programme). '2022 Special Report on Human Security'.

> *UNDP (United Nations Development Programme)*, 2022. https://hs.hdr.undp.org/,.

UNDP (United Nations Development Programme). 'Human Development Report 1994'. *UNDP*

> *(United Nations Development Programme)*, 1994.

> https://hdr.undp.org/system/files/documents/hdr1994encompletenostats.pdf.

United Nations. 'Inequality-Adjusted Human Development Index'. *Human Development*

> *Reports*. United Nations. Accessed 9 April 2025. https://hdr.undp.org/inequality-

> adjusted-human-development-index.

World Bank. 'Multidimensional Poverty Measure'. Text/HTML. World Bank. Accessed 9 April

> 2025. https://www.worldbank.org/en/topic/poverty/brief/multidimensional-poverty-

> measure.

Xiao, Ren. 'Human Security in Practice: The Chinese Experience'. In *Human Security Norms in*

> *East Asia*, edited by Yoichi Mine, Oscar A. Gómez, and Ako Muto, 45–65. Security,

> Development and Human Rights in East Asia. Cham: Springer International Publishing,

> 2019. https://doi.org/10.1007/978-3-319-97247-3_3.