



Addressing comments and concerns regarding York University Study “Modeling impact on consumer packaged goods pricing resulting from the adoption of Extended Producer Responsibility in New York State”

Contents

Critical Statement: The York University Study does not acknowledge funding sources 2

Critical Statement: The New York State study ignores real world examples of EPR for packaging programs around the world. EPR has existed for more than 30 years in countries across Europe and Asia, and there is no evidence to show that EPR has an impact on packaging prices:..... 2

Critical Statement: The York University Study Assumes —without Justification — that Producers Will Pass All Costs Directly on to Consumers 3

Critical Statement: Where EPR for Packaging is already in place, recycling rates are double what Maine's are..... 4

Critical Statement: Well-designed EPR systems, not only increase recovery and recycling of packaging material, but also provide incentives for specific environmental objectives.. 5

Critical Statement: The Modeling Performed in the New York State Study by York University Lacks Transparency and Clear Sources of Data 7

Critical Statement: The study has not been peer reviewed and cites the authors own non peer reviewed research..... 10

Critical Statement: The study also makes several assumptions that are not justified or supported by citations..... 11

Critical Statement: All data on packaging amounts and costs of managing the packaging were provided by the Consumer Brands Association, which is known to oppose EPR legislation. The data from Consumer Brands Association is extrapolated from Ontario. 12

Critical Statement: The bottom line is this: no credible evidence has been provided that LD 1541 would have any measurable impact on the price of packaged goods in Maine if LD 1541 becomes law. 13

Conclusion: Stakeholders need to understand what you can and can't do with data 13



This primer is being written in response to some of the criticisms and concerns expressed regarding York University's study on the potential economic impacts of EPR legislation in New York State. This is being done to provide to provide context and clarity to the study assumptions and results, as well as address false and misleading statements made by critics of the study.

Critical Statement: The York University Study does not acknowledge funding sources

Disclaimer: York University, nor the study author (Dr. Calvin Lakhan) has received any funding or financial support to conduct this research. The impetus for conducting this study is to better understand the economic impacts attributable to the adoption of extended producer responsibility, which is a poorly understood topic that has received limited academic attention. York University has not been directed to conduct this research on behalf of any particular stakeholder, and is not affiliated with any producer, industry association or advocacy group.

Critical Statement: The New York State study ignores real world examples of EPR for packaging programs around the world. EPR has existed for more than 30 years in countries across Europe and Asia, and there is no evidence to show that EPR has an impact on packaging prices:

While the New York State study conducted by York University does not undertake a review of EPR legislation from other jurisdictions, it was not considered within the purview of the study objectives and was not pertinent to our discussions on modeled cost increases. However, York University has undertaken a comprehensive review of EPR jurisdictions from around the world, including several studies surrounding EPR governance as well as historical recycling system performance across jurisdictions (measured both in costs and diversion rates)

The claim that there is no evidence that EPR legislation increases consumer packaged goods costs is based on a faulty premise – the absence of evidence is not proof of outcome. There is a relative paucity of studies that specifically examine the economic impact of EPR for packaging waste, with the RRS study being the only study published in the last decade (and the study had numerous methodological flaws). There is no evidence of EPR impact on packaging costs largely because no research has been conducted in this area, in part because it is extraordinarily difficult to isolate the impacts of EPR legislation on costs “after the fact”.

Looking at CPG basket of goods costs and purchasing power indexes for jurisdictions who have some form of producer responsibility for packaging waste, we observe a significant increase in the price of consumer goods (and a decrease in consumer purchasing power) over time. Attributing this increase to any one specific activity or policy is extraordinarily difficult to do - There are literally hundreds of variables that affect the price of goods across localities (even for the same product and retailer). Demographics, infrastructure, relative purchasing power,



proximity to markets, density of competing retailers etc. all effect price. In order for a study to make any credible claims regarding the relationship between EPR and packaged goods costs, they would have to control for all of these factors (i.e. using statistical techniques such as multivariate regression to specifically isolate the effects of EPR on packaging prices). Given that many of these explanatory variables are collinear, they would also need to establish controls for interdependency among explanatory variables. In short, it is extraordinarily difficult to do, which is why there is a dearth of credible research in the area.

The ability to model the potential economic of impacts of EPR legislation prior to its adoption affords greater control of study variables, and in many ways, provides more meaningful and credible insights.

It is the absence of research in this area that necessitates further investigation – the statement (“we have more than 30 years of data to evaluate the impact EPR for packaging has on the price of consumer goods”) is patently false. Whatever data exists is not in a form that readily allows for modeling the impact of EPR legislation on packaged goods pricing. Once again, the absence of evidence is largely because nobody has asked the question – it is not indicative of proof of outcome, and presenting it as such is disingenuous.

Critical Statement: The York University Study Assumes —without Justification — that Producers Will Pass All Costs Directly on to Consumers

While critics of the study are correct that this assumption was made in the NYS EPR study, it was done for two reasons:

- 1) Producers can respond to EPR fees in any number of ways, and in the absence of knowing how exactly producers (from a diverse range of sectors) will respond, we needed to provide boundaries for our analysis. It is not feasible nor practical to model every possible permutation, as no data has ever been gathered regarding producer responses to EPR
- 2) Based on the “Pay in Model” used in multiple Canadian jurisdictions (where the Pay in Model is used to calculate material specific fee rates for obligated stewards), by definition, any increase in net system costs are passed onto the consumer. This isn’t a matter of debate or speculation, this is how the fee model actually works.

The fee schedule for individual materials is calibrated around the overall steward obligation (net system costs for the entire residential recycling program). If the overall net system cost increases by 10% (i.e. \$200 million to \$220 million), fees for obligated producers will be automatically adjusted to recover these costs. It is important to note that fee rates for individual materials will not increase by a uniform 10%. The PIM model is intended to incentivize recycling performance using a form of eco-fee modulation, with “more recyclable materials” paying a smaller fee



relative to “less recyclable materials”. As a result of this cost cross subsidization, certain material types (i.e. LDPE film) are disproportionately impacted by any increase in net system costs. Since these fees are built into a product’s price at the point of purchase (eco-fees for packaging waste are not visible), consumers absorb the full increase in net system costs.

While not all jurisdictions adopt the same fee model that is used by Canadian jurisdictions, York University could only base it’s analysis on best available data.

Critical Statement: Where EPR for Packaging is already in place, recycling rates are double what Maine's are. The reason for this is because producers have a direct economic incentive to produce less-wasteful packaging that can easily and profitably be managed by municipal recycling programs. Another reason for the higher rates is because there is a sustainable source of funding for recycling collection, processing, and recycling education.

The above statement is based on a faulty premise and erroneously concludes a causal relationship between EPR adoption and recycling rates. While I can understand why someone might look at the data and arrive at this conclusion, it ignores broader macro and temporal factors that influence a jurisdictions recycling rate.

The maturity of a waste management system is rarely discussed when evaluating the effectiveness of waste management policy. As an extension to a point I made earlier, where you are starting from radically affects the potential efficacy of given program or policy. During a program’s onset, initiatives such as promotion and education, service expansion, increased accessibility are likely to yield significant improvements in the overall recycling rate. However, as a program matures, the impact of these initiatives diminishes – not because the policies no longer work, but because they have already “captured” people who are likely to participate in recycling. As a system matures, so does the difficulty in diverting the “marginal tonne”. Initial program success is characterized by the recovery of readily recyclable materials (newsprint, OCC/OBB, Aluminum etc.) among groups who face low barriers to participation (single family homes with curbside access). Once a program reaches a “stasis” point, going over and above that particular level of recycling requires increasingly more effort (expressed in terms of time, cost, resource etc.).

Future increases or decreases in diversion rates are unlikely to differ significantly from this stasis point, barring major programmatic changes or systemic disruption (i.e. Financial crisis of 2009/2010, Chinese sword etc.). As an example, Ontario’s “steady state” recycling rate for the Blue Box program is between 60% and 67%. By comparison, British Columbia’s “steady state”, appears to be between 75% and 80%. Differences in the steady state point across jurisdictions



are often a function endemic factors that are specific to a particular area (demography, infrastructural access etc.) and cannot be readily replicated by other cities/provinces/states.

Returning to the discussion of cause and effect, policy makers will often erroneously conflate the effectiveness of a particular policy in one area (at a given point in time) and assume that to be true for all other areas. Recycling promotion and education is a good example of this – the effectiveness of P&E at a programs onset (where awareness and attitudes towards recycling are low) is demonstrable. It is a critical tool that yields positive results..... at first. As a system matures, the effectiveness of recycling P&E diminishes (Lakhan, 2014: <https://doi.org/10.1016/j.resconrec.2014.07.006>) .

While the study linked above goes into a more detailed discussion as to why, the simplest way to describe this phenomenon is that at a certain point, the people targeted by P&E will already be recycling. Appeals to environmental altruism, sustainability and collective responsibility will resonate with certain households, who will then make recycling a habitual behavior (hence the uptick in recycling performance at a programs onset). However, that same messaging over time does very little to encourage recycling among households who either don't care about the importance of recycling, or more likely, face infrastructural, knowledge based or cultural barriers to access.

There is a temporal dimension to understanding cause and effect in waste that obscures the relationship between action and outcome. Without taking the time to consider system maturity or a given jurisdictions "starting" and "stasis points", it is incredibly easy to arrive at the wrong conclusions.

Critical Statement: Well-designed EPR systems, not only increase recovery and recycling of packaging material, but also provide incentives for specific environmental objectives. The per-ton-pricing provides a direct incentive for producers to reduce the amount of packaging they use. Additionally, eco-modulated fees add financial incentives for producers that incorporate post-consumer recycled content in packaging, reduce toxicity of packaging, and switch to packaging materials that are readily recyclable. Experience from other jurisdictions illustrates that producers are much more likely to try to reduce their burden by meeting these environmental targets, rather than passing increased costs on to consumers.

This statement is false and cannot be supported by data (particularly in a North American context). Using Canadian EPR jurisdictions as an example (Ontario, British Columbia, Quebec and Manitoba), year over year increases in net system costs per tonne are increasing by more than 10%, while recycling rates are trending downwards. Increases in cost (as well as decreases in overall recycling rates) are largely explained by the proliferation of light weight composite packaging.



“The evolving tonne” is a phenomenon that has been acknowledged and accepted by policy makers across North America – the recycling bin of today is fundamentally different than what it was even as little as 10 years ago. Readily recyclable materials, i.e. newsprint, corrugated cardboard, boxboard etc., are making up less of the overall proportion of packaging materials currently recycled. By contrast, light weight, flexible and composite packaging (difficult to recycle materials) are now making up a greater proportion of the overall waste stream. Due to the costs associated with attempting to recycle these materials, and the fact that they are making up more of all packaging being put onto the market, we observe rapidly increasing recycling system costs and declining recycling performance. Once again, this is not a matter of debate – every Canadian jurisdiction with EPR for packaging waste has experienced an increase in per tonne recycling costs and stagnating (or declining) recycling rates over time. As such, the claim that a well-designed EPR system encourages cost containment and recycling rate performance is false, and there is no data to suggest that it does.

The package light weighting phenomenon is also indicative that producers are designing **LESS** recyclable packages over time, not more. The entire reason why municipalities are calling for EPR is that existing recycling infrastructure is now fundamentally incompatible with the types of products being generated. Eco-modulated fee rates (such as the ones used in Ontario and British Columbia) have had no discernable impact on the design of packaging, its recyclability or the development of recycling end markets. One needs to look no further than laminated paper packaging producers (coffee cups etc.) in Ontario, who have paid millions of dollars in packaging fees over the past decade and face the second highest fee rate of all Blue Box materials. Despite the intended eco-modulated incentive that should encourage laminated paper producers to improve recycling rates and develop end markets, recycling performance has remained unchanged, while material management costs have increased by 30%. Arguably, an EPR program intended to encourage recyclability will result in inferior economic and environmental outcomes.

Referring to the principles of the waste management hierarchy – reduction is preferred to reuse, and reuse is preferred to recycling, then through that lens, many producers are already developing more sustainable packaging. Once again, the issue is that most people (both policy planners and the public) conflate recycling with sustainability – if it can’t be recycled, it must be bad. This is perhaps what is most dangerous about existing EPR legislation, is that it focuses on recycling based outcomes and is intended to “improve recycling rates and recycled content requirements” for printed paper and packaging. However, not all recycling is created equal, and in many instances, prioritizing mechanical recycling at the expense of other end of life outcomes can be detrimental both environmentally and economically.

While package light weighting has often been characterized as a negative due to low levels of recyclability, most life cycle analysis studies demonstrate that the “upstream” environmental



savings (resulting from a reduction in material used, efficiencies in transportation and logistics and increased shelf life) significantly offsets or supersedes the environmental impact of being unable to recycle those materials.

Existing and proposed legislation incents recycling (and in some instances, takes punitive measures towards materials that have low levels of recyclability), but offers no credit for the waste reduction that is achieved. In many ways, the existing approach may result in an environmentally and economically perverse outcome, where producers “switch back” into heavier, but more recyclable packaging, yielding a worse environmental outcome.

Critical Statement: The Modeling Performed in the New York State Study by York University Lacks Transparency and Clear Sources of Data

The study author acknowledged both the lack of data and methodological deficiencies surrounding data in the New York State report, with the key finding that jurisdiction specific data be gathered to help inform evidence based policy.

Proponents of EPR (and detractors of the NYS study) are trying to deliberately misrepresent both the intentions of the author and level of transparency. The issue at hand is a complete lack of data for New York State – the fact that we have to use data surrogates from other jurisdictions (i.e. net costs per tonne from the Stewardship Ontario Pay in Model) highlights just how little we know regarding the potential impacts of EPR. The intent of the New York State study was to shed light onto the issues that arise (and are often neglected) when implementing EPR, and demonstrate some of the key learnings and challenges associated with EPR from Canadian jurisdictions. Readers were cautioned repeatedly not to transpose the findings from one jurisdiction to another, as site and situation specific factors make it difficult to engage in an “apples to apples” comparison.

There is a lack of “clear and reliable data sources” because no such public source exists. York University was forced to use a patch work of studies and data sources, and as best we could, model conditions that are reflective of what is being proposed in New York State. The study author has asked repeatedly for other organizations and institutions to share better data should it be available, but it is becoming quite evident that the necessary data does not exist (or perhaps more accurately, has not been collected). Pointing out deficiencies in the data or assumptions used in the study does not mean that the findings lack credibility or is somehow proof that EPR has no impact on packaging prices. The onus is on the person who disagrees to offer evidence to the contrary – at present, the analysis conducted by York University is the only of its kind.

The decision to not release the input/output model used to quantify indirect and induced impacts of EPR legislation is one part practical, and one part proprietary. Both the log-linear analysis and development of a packaging specific I/O model is outside the scope of what traditionally would



be included in the documentation of a report. In fact, there is no easy way to depict how modeling was conducted, as it is developed within a statistical software package (Stata) and can only be shared if the file is sent to another person who has a license for Stata. Both the data and model developed by the University is based on a paid license, which the author is prohibited from sharing without the explicit consent of license owners.

The university strongly recommends that people who disagree with the NYS study findings conduct their own analysis. As noted above, to date, only RRS has conducted a similar study, and the approach that they utilized has numerous methodological limitations surrounding variable controls (an issue acknowledged by RRS). In fact, given the paucity of relevant research, this topic necessitates additional investigation by as many (trained) stakeholders as possible.

To help guide policy makers regarding data considerations, York University published a list of “EPR data requirements/considerations” that explicitly laid out what data should be collected by a jurisdiction before adopting EPR legislation.

Effective EPR legislation requires clear answers to the following questions:

- What printed paper and packaging materials does the legislation intend to cover? Does this include “packaging like” materials, which includes flexible packaging, multi-resin plastic packaging and bio-based compostable packaging? (i.e. compostable plastics). Generally speaking, EPR should look to obligate materials that are generated in sufficient quantity within a given jurisdiction and can actually be recovered given existing waste management infrastructure.
- Do you know the quantities of obligated materials being generated and recovered in your jurisdiction? (Measured in tonnes). If so, how are these figures calculated? (Both on aggregate, and on a material specific basis)? As an example, New York State has proposed that both Polycarbonate and PVC plastics be included as an obligated material, but there are no readily available data source that give you any sense of how much of these materials are actually being generated/recovered in the state.
- What percentage of obligated materials come from the residential sector, and what percentage of these materials come from the Industrial, Commercial and Institutional (IC&I) sector? Will obligated materials generated by the IC&I sector but managed as part of the residential sector be subject to producer responsibility fees, and if so, how will this obligation be assigned? The blurring of the line between residential and IC&I sector waste has been a significant issue in Ontario, as the province has claimed packaging waste from the IC&I sector is ending up in the residential Blue Box program. As a result, the province has suggested expanding the scope of producer responsibility legislation to include certain IC&I sectors such as schools and retirement facilities. Unfortunately, data for the

IC&I sector remains largely unavailable (as is the case in most jurisdictions where IC&I generators traditionally fall outside of the purview of producer responsibility legislation).

- How is paper and packaging waste currently being collected/sorted in your jurisdiction, and by whom? (I.e. private contractor vs. municipality). Under proposed EPR legislation, will you expect producers to assume both the operational and financial responsibility of managing the residential recycling program, or can existing collection and operational arrangements be honored? Will producers be able to negotiate new service contracts in order to seek out the lowest cost service provider?
- What reporting requirements should be in place for waste service providers to report out on quantities of material collected, sorted and baled? Who will be responsible for overseeing data collection, and the development of a central data repository? Who will own this data, how will this data be vetted and verified, who will have access to this data and how will it be used for the purposes of determining the producer obligation?
- At what point do you measure a material as being recycled? (i.e., baled and marketed vs. quantity of materials reprocessed into a secondary good)
- Do you have data on material specific recycling/diversion costs? (this includes cost of collection, transport and processing/sorting) If so, how were these figures calculated?
- What methodology is used to allocate recycling system costs to individual material types for the purposes of developing a fee schedule?
- Do you intend to adopt an eco-modulated fee schedule? (Where fee rates are intended to incent design for the environment and prioritize environmentally preferred materials)
- What EPR governance model will your jurisdiction use and why? (I.e. EPR schemes managed by one single Producer Responsibility Organization (PRO), EPR schemes managed by several non-competing PROs, EPR schemes managed by several competing PROS etc.). As an anecdote, in a review of 32 jurisdictions with packaging EPR legislation lead by York University, there was no clear evidence that competitive compliance schemes lead to greater cost efficiencies for obligated producers. In fact, all things being equal, the presence of a single PRO monopoly results in a statistically significant reduction in per capital recycling system costs when compared to a competitive PRO system. I highlight this specific finding as there is a general assumption among policy planners that competition leads to cost containment with respect to EPR governance.
- How will packaging fees be collected and remitted by obligated producers? Who is responsible for fee collection and disbursement?
- Who will be responsible for data auditing, verification and reconciliation with respect to the data being used to calculate system costs, relative share of system costs based on material type and overall program performance?



- Will your jurisdiction implement a de minimus exemption for small producers of printed paper and packaging? If so, what threshold will you use and why?

On a material by material basis, do you have information on the following?

- Proportion of Overall Residential Waste Stream
- Recovery/Recycling Rate %
- Revenue (per tonne)
- Gross Recycling Costs Per Tonne
- Net Recycling Costs Per Tonne
- Is this material accepted by most municipal recycling programs in your jurisdiction?
- Is there available recycling and processing infrastructure to readily recycle this material? Is there end market demand for this material?*
- How much carbon is abated when recycling one tonne of this material?*
- What are the environmental impacts of having this material go to landfill?*

Do you have any data on how both producer and municipal administrative costs change in response to the adoption of EPR legislation?

Do you have any data on whether the adoption of EPR legislation affects the cost of consumer packaged goods?

Do you have any data on whether the adoption of EPR legislation leads to a reduction in the municipal tax base?

Do you have any data to demonstrate that the adoption of EPR legislation will lead to increased recycling rates?

York University's goal is to not to advocate on behalf of any specific organization, sector or industry, but ensure that policy is based on sound science and evidence. We are advising policy makers to press pause on moving forward with EPR legislation, as there are significant dangers associated with moving forward with EPR legislation. Without a better understanding of what data exists, how it can be used, and what analysis needs to be conducted, jurisdictions risk repeated the failures of what is happening in Ontario.

Statement: The study has not been peer reviewed and cites the authors own non peer reviewed research

These statements are being made to deliberately undermine the credibility of the study author, implying that the research conducted by the university has been avoiding peer review. This is not only false, but critics citing a lack of peer review may not fully understand what peer review actually entails – it appears they are conflating publishing in an academic journal with publishing



“Grey/white literature” and industry reports. White papers by their very nature are “breathing/living” documents that are intended to be shared with a broad range of stakeholders for critique and comment. The entire purpose of a white paper is to solicit feedback, which is why the New York State study was published openly with a call for stakeholders to provide better data should they have access to it.

York University has published more than 50 studies between 2017 and 2021, all of which have been subject to review and comment by industry, academia, government and other interested stakeholders. Many of these studies are publicly posted on either the university website or the internet – the decision to make these studies available via open access (as opposed to academic journals) is largely because there is a lack of credible research regarding waste management in a North American context. Academia has historically been heavily criticized for publishing papers behind pay walls and generating research that has little real world relevance. The Waste Wiki was conceptualized in 2016 as an open access data and research repository (hence Wiki in the name) that focused on the democratization of research.

Our research is openly shared precisely because we would like feedback and critiques (from both supporters and detractors). The purpose of our studies on EPR is not to obfuscate its adoption or question its efficacy, it’s to help jurisdictions understand the full range of economic, social and environmental impacts that are often poorly understood by policy planners. As an example, Recycle BC’s EPR program has often been touted as a success and is used as a best practice model to be emulated by other jurisdictions. The reality of the situation when examining the data is quite different (based on an analysis of program data that is published in Recycle BC’s own annual reports).

Statement: The study also makes several assumptions that are not justified or supported by citations. The entire study only contains one citation, which is a self-citation to previous research. No additional information is provided. Below is a sample of assumptions and statements made without any support or justification:

- *Producers will pass on all costs to consumers rather than internalize them. As explained above, this is extremely unlikely.*

This comment is addressed above

- *There will be a 15% reduction in taxes. There is no citation for this and no justification for how the percentage was calculated*

This assumption was based on the anticipated reduction in waste collection levies in Ontario for municipalities who presently adopt a fee for service model for recyclable collection (i.e. Toronto).



This is in direct contrast to municipalities who build waste collection costs into property taxes – based on data from both British Columbia and Ontario, the adoption of EPR had no impact on property taxes in either jurisdiction (in fact, both jurisdictions experienced significant year over year increases in property taxes, but this can be attributed to any number of exogenous factors unrelated to EPR policy)

- *The administrative cost for running the EPR program will be 5% of the total net system cost annually. Again, there is no citation and no justification provided for how this percentage was reached.*

At present, the Province of Ontario calculates municipal administrative expenses to be 5% of annual net system costs (for recycling). This 5% is the annualized cost, and does not include costs associated with data collection and administrative startup costs

- *Asserts that low-income individuals and families eat more packaged foods and therefore will be more heavily impacted by increased costs*

The study didn't feel the need to reference this, as it is widely known (at least within the academic community). This is a recent example:

French, S.A., Tangney, C.C., Crane, M.M. et al. Nutrition quality of food purchases varies by household income: the SHoPPER study. BMC Public Health 19, 231 (2019). <https://doi.org/10.1186/s12889-019-6546-2>

Statement: All data on packaging amounts and costs of managing the packaging were provided by the Consumer Brands Association, which is known to oppose EPR legislation. The data from Consumer Brands Association is extrapolated from Ontario.

This is also a false statement. Data provided by the Consumer Brands Association was simply a summary of data collected by the US EPA. This data included total quantities of printed paper and packaging generated and recovered in New York State.

All material specific net system costs were taken from The Stewardship Ontario Pay in Model. As acknowledged in the NYS study, these costs may not be representative of recycling system costs from other jurisdictions. However, it is the only publicly available source for residential recycling system costs – highlighting that there is a lack of credible data pertaining to recycling costs. Once again, the NYS study was explicit in saying that it ***was not*** appropriate to use the costs from one jurisdiction to extrapolate for the costs of another. In fact, the study's key finding was that New York State should collect state specific data on recycling costs prior to the adoption of EPR policy, and at no point did the university indicate that that the modeled costs were precise.



Opponents of the NYS study are creating a false narrative that the university is trying to use Ontario data as some sort of “bait and switch” to artificially inflate the costs of EPR and its impact on consumer packaged goods. To the contrary, the university has used best available data in an attempt to undertake analysis that hasn’t been conducted by any other organization (including state policy makers). The university welcomes additional and state specific data and would be happy to re-run the analysis using the revised numbers.

Statement: The bottom line is this: no credible evidence has been provided that LD 1541 would have any measurable impact on the price of packaged goods in Maine if LD 1541 becomes law.

The university has never claimed that the New York State study could be applied in Maine, and has repeatedly stated that every jurisdiction is different, and as a result, any comparisons should be made with extreme caution.

What proponents of LD 1541 legislation fail to understand is that the absence of evidence is not proof of outcome (as noted earlier). Even if the study conducted in NYS was inherently flawed because of a deficient methodology, it does not mean that EPR has no impact on the price of packaged goods. At best, the only conclusion you can draw is that York University failed to demonstrate that EPR legislation in NYS increased the price of packaged goods - there is no transitive property to that finding.

The impact of EPR legislation on the price of consumer goods in Maine is unknown. In the absence of actually collecting the relevant data and undertaking the analysis, the impact will remain unknown. As such, the university recommends (and has always recommended) that each state undertake their own analysis, and avoid trying to use examples from other jurisdictions (positive or negative) as proof of what would happen.

Conclusion: Stakeholders need to understand what you can and can’t do with data

Both opponents and proponents of EPR legislation need to understand what can and can’t be done with data. York University has waded into this conversation not because we were asked to by any particular group or stakeholder, but because we have seen just how catastrophic poorly designed EPR policy can be.

What is most concerning about the discussions surrounding EPR legislation in New York and other states is the lack of understanding surrounding the state of data (what is available, who has it, what can be done with it, what needs to be collected etc.). As noted above, many of the statements being made (either in objection to the NYS study, or in favor of EPR) cannot be supported by data, and are often the result of not fully understanding the differences between correlation and causation, or how to correctly interpret and analyze data. York University strongly



encourages additional research in this area by individuals who have the requisite training in quantitative analysis, study design and statistics.

Research surrounding the impacts of EPR legislation on consumer packaged goods and the economy as a whole remains in its conceptual infancy. While EPR legislation has been in place for the better part of three decades in some jurisdictions, it has received scant academic attention, under the presumption that more recycling is a “good thing”. However, recent research (conducted by York University and other) has not only shown that recycling may not be a good thing in all instances, but that that the performance of our recycling systems is declining in response to package light weighting. A dearth of relevant research is an opportunity to go out and gather data to better understand the issue – it is not a green light to railroad EPR policy where the impacts remain poorly understood.

Please feel free to address any comments, questions or concerns to:

Dr. Calvin Lakhan

lakhanc@yorku.ca

Faculty of Urban and Environmental Change, York University

416-523-5164