WP1: Methodology Inventory

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The methodological inventory: "develop an inventory of methodological approaches for NTM estimation and assessment. It will do so by surveying both the current state of the art academic literature and the efforts of various policy institutions..."

⇒ Comprehensive overview of what is out there

⇒ A meta-analysis in terms of methods (of course), but also data used, as well as geographical scope (?)

⇒ A first step in linking methods to data, i.e. basis for the GAP analysis

⇒ A living doc that is updated in the course of PRONTO
<table>
<thead>
<tr>
<th>Lead Author</th>
<th>Co-author(s)</th>
<th>Year</th>
<th>Source</th>
<th>Title</th>
<th>Full reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fontagné, L.</td>
<td>Bernard, A.E., Sarkar, S., Hertel, T., Davids, R.B.</td>
<td>2012</td>
<td>Journal</td>
<td>Test</td>
<td>Test</td>
</tr>
</tbody>
</table>

**Methodological Information**

**Reason**

Scope: Industry/Sector

Data source: WTO, Regional Trade Agreements Information System (RTA-IS)

**Country focus**

**References**

**Select lead author**

Select co-author(s)

Enter year

Select source

Enter title

Enter full reference

**Methodological Information**

**Reason**

Scope: Industry

Method: Price difference

Data source: WTO, Regional Trade Agreements Information System (RTA-IS)

**Country focus**
Methodology Inventory

- In thinking about classifying *how* NTM measures are used:
  - Reason: what is the goal?
  - Perspective: looking backwards or forwards?
  - Scope: How wide is the net?
  - Method: in what way is the NTM measure used?
<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>CATEGORIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Reason</td>
<td>Alternative Measure of NTM</td>
<td>For example, converting the number of import documents needed into a tariff equivalent</td>
</tr>
<tr>
<td>23</td>
<td>Reason</td>
<td>Consequences of NTM</td>
<td>For example, the impact of the number of import documents needed on trade flows</td>
</tr>
<tr>
<td>24</td>
<td>Reason</td>
<td>Both A and C</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Reason</td>
<td>Determinants of NTM use</td>
<td>For example, how corruption feeds into the level of NTMs</td>
</tr>
<tr>
<td>26</td>
<td>Perspective</td>
<td>Retrospective</td>
<td>Explaining past patterns; e.g., regression analysis</td>
</tr>
<tr>
<td>27</td>
<td>Perspective</td>
<td>Predictive</td>
<td>Predicting future outcomes; e.g., CGE</td>
</tr>
<tr>
<td>28</td>
<td>Perspective</td>
<td>Both</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Scope</td>
<td>Industry/Sector</td>
<td>Relatively narrow impacts, e.g., regression on trade in a product or partial equilibrium simulations</td>
</tr>
<tr>
<td>30</td>
<td>Scope</td>
<td>Economy wide</td>
<td>Relatively broad impacts, e.g., total imports, GDP growth, or CGE/cross-sector impacts</td>
</tr>
<tr>
<td>31</td>
<td>Method if A</td>
<td>Price</td>
<td>Using price differences to back out NTM</td>
</tr>
<tr>
<td>32</td>
<td>Method if A</td>
<td>Quantity</td>
<td>Using quantities traded to back out NTMs</td>
</tr>
<tr>
<td>33</td>
<td>Method if A</td>
<td>Gravity</td>
<td>Using a regressions on trade in order to back out NTM measure</td>
</tr>
<tr>
<td>34</td>
<td>Method if A</td>
<td>Financial</td>
<td>Using financial data to back out NTMs</td>
</tr>
<tr>
<td>35</td>
<td>Method if C</td>
<td>Regression</td>
<td>Regression analysis; cross-section or panel</td>
</tr>
<tr>
<td>36</td>
<td>Method if C</td>
<td>Gravity</td>
<td>When the regression somehow comes close to a gravity regression; e.g., a dependent variable that is trade flows, FDI activity, etc. Includes both</td>
</tr>
<tr>
<td>37</td>
<td>Method if C</td>
<td>Price Gap/Price Wedge</td>
<td>Where the dependent variable is a price gap, e.g., the difference between the fob and domestic prices</td>
</tr>
<tr>
<td>38</td>
<td>Method if C</td>
<td>Other</td>
<td>Catch all for other regressions, including those looking at determinants of GDP growth, etc.</td>
</tr>
<tr>
<td>39</td>
<td>Method if C</td>
<td>Event Study</td>
<td>Event study methodology; e.g., impact of NTM announcement on stock prices</td>
</tr>
<tr>
<td>40</td>
<td>Method if C</td>
<td>VAR</td>
<td>VAR analysis (different than CGE as this is determining the coefficients)</td>
</tr>
<tr>
<td>41</td>
<td>Method if C</td>
<td>Simulation</td>
<td>Simulation analysis</td>
</tr>
<tr>
<td>42</td>
<td>Method if C</td>
<td>Sectoral</td>
<td>Simulations at a sector level; no or limited cross sector impacts</td>
</tr>
<tr>
<td>43</td>
<td>Method if C</td>
<td>CGE</td>
<td>General equilibrium; includes income changes and cross-sector impacts</td>
</tr>
<tr>
<td>44</td>
<td>Method if C</td>
<td>SimCGE</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Method if D</td>
<td>Regression</td>
<td>Back of the envelope calculations; e.g., an increase in visas by 1000 means 1000*pay difference increase in GDP</td>
</tr>
</tbody>
</table>
Purpose

• What is the reason that the study is using a NTM measure?

⇒ Alternative Measure of NTM (A): converting the number of import documents needed into a tariff equivalent
⇒ Consequences of NTM (B): the impact of the number of import documents needed on trade flows
⇒ Both: both A and C
⇒ Determinants of NTM use (D): how corruption feeds into the level of NTMs

• This informs a lot about the norms for how the measure is being used
Perspective

• Is the NTM measure being used to explain past data patterns or predict future outcomes?
  ⇒ Retrospective (Retro): regression analysis on impact of past liberalization
  ⇒ Predictive (Predict): CGE predictions of liberalization
  ⇒ Both (Both): both Retro and Predict

• This informs the norms as well as type of measure, e.g. CGE would probably need tariff-equivalent whereas regression could use 0/1
Scope

• How wide is the study’s focus?

⇒ Industry/Sector (Micro): Narrow impacts, regression on trade in a product or partial eq. simulations

⇒ Economy wide (Macro): Broad impacts, total imports, GDP growth, or CGE/cross-sector impacts

• This is a bit of a judgement call, but cross-sector impacts would be more Macro
Given the differing approaches under the different reasons, we break this down into:

- Method if A (alternative measure)
- Method if C (consequences)
- Method if B (create alternative measure and estimate consequence)
- Method if D (determinant of NTM)
Method if Alternative Measure Reason

- Method determined by the type of data used
  - Price (P): Using price differences to back out NTM
  - Quantity (Q): Using quantities traded to back out NTMs
  - Gravity (G): Using a regressions on trade in order to back out NTMs
  - Financial (F): Using financial data to back out NTMs
Largest set of different methodologies

Three sub-categories

⇒ Regression (R): Regression analysis; cross-section or panel
⇒ Simulation (Sim): Simulation analysis
⇒ Back of the Envelope (BOE): Simple calculations; e.g. an increase in visas by 1000 means 1000*pay difference increase in GDP

Davies (2014)
Regression Methods if Consequence Reason

- **Gravity (RG):** When the regression is close to a gravity regression; e.g. a dependent variable that is trade flows, FDI, includes both extensive and intensive margins
- **Price Gap/Price Wedge (RP):** Where the dependent variable is a price gap, e.g. the difference between the fob and domestic prices
- **Other (RO):** Catch all for other regressions, including those looking at determinants of GDP growth, etc.
- **Event Study (EV):** Event study methodology; e.g. impact of NTM announcement on stock prices
- **VAR (VAR):** VAR analysis (different than CGE as this is determining the coefficients)
Simulation Methods if Consequence Reason

- Sectoral Simulation (SimSec): Simulations at a sector level; no or limited cross sector impacts
- CGE (SimCGE): General equilibrium; includes income changes and cross-sector impacts
Method if Determinant of NTM Reason

- Regression (RD): determinants of AD duties
Methodology Inventory

- Four fields of categorization:
  - Reason: what is the goal?
  - Perspective: looking backwards or forwards?
  - Scope: How wide is the net?
  - Method: in what way is the NTM measure used?

- Categories are *not* mutually exclusive
- This is intended to be a living classification