Abstract:

Ukraine’s system of non-tariff measures (NTMs) has been under transformation for several decades, gradually evolving from the Soviet Union past towards the EU system, alignment with which has been proclaimed by EU-Ukraine Association Agreement. The WTO membership significantly contributed to changes in NTMs, especially in the sphere of technical barriers to trade.

The aim of this study is to analyze development of Ukraine’s NTMs on imports starting independence and to compare the level of protection offered by the NTMs with import tariffs. The paper continues the study the evolution of trade policy in Ukraine, in particular the NTMs reforms started by Movchan & Eremenko (2003).

The preliminary results showed that indeed Ukraine has been gradually liberalizing its NTMs. The intensity of usage of non-tariff measures measured by number of NTMs applied toward each particular tariff line weighted over total number of applied NTMs and tariff lines dropped by approximately one third. The first significant reduction occurred in 2000, the year of important deregulation reforms in the country. Later on, the NTMs usage somewhat revived, but remained lower than pre-reform level. The second considerable reduction occurred in 2009 following Ukraine’s membership in the WTO. The deregulation and harmonization of legislation with the EU norms and practices recently generated the third wave of reduction.

Other positive observation is that duplication of controls considerably reduced. After Ukraine became a member of the WTO, the duplication of functions between TBT and SPS related controls was largely removed.

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Introduction

Trade liberalisation is widely recognized as important stimulus for economic growth and prosperity. It includes two components, namely liberalisation of tariff regime and reduction of trade-distorting effects of non-tariff measures (NTMs). In this paper, we concentrate on the latter aspect of the Ukrainian trade liberalisation.

Although non-tariff measures as a part of country’s protectionism had existed through ages, they have drawn special attention only in the early 70th. This interest was closely connected with the success of the GATT trade rounds in reduction in tariff barriers and, as a result, growth in the NTMs. These barriers are less transparent, more flexible, and extremely variable. These characteristics made the NTMs important substitutes for country’s tariff regimes. According to the United Nations Conference on Trade and Development (UNCTAD) classification, there are sixteen distinct groups of non-tariff measures of technical and non-technical character (UNCTAD, 2013).

Recently, non-tariff measures have become in a focus of the trade policy discussion in Ukraine. It is happened after the accession of the country to the WTO (2008) and accelerated by the ratification of Association Agreement (AA) between the EU and Ukraine (2014). The WTO membership created an important push for reforms in the NTMs, especially in the TBT and SPS, as Ukraine committed to align its trade regime with the WTO Agreements. The AA made step further envisaging comprehensive harmonization of the TBT and SPS applied by Ukraine with the EU acquis.

The aim of this study is to analyze evolution of Ukraine’s NTMs with the focus on technical measures. The rest of the paper is organised as follows. Section 1 provides a brief overview of NTMs theory including definition of this phenomenon and methods of NTMs measurement. Section 2 briefly describes database of Ukraine’s NTMs, methodology of its construction and analyses evolution of Ukraine’s NTMs as measured by frequency and intensity indices. Finally, conclusions are provided in Section 3.

1 Theory of Non-Tariff Measures

Before we consider particular measurement techniques, let’s focus for a moment on the definition of non-tariff measures. Such researchers as Baldwin (1970), Walter (1972), and Deardorff and Stern (1997) provided their definitions of this phenomenon. Moreover, several international organisations like UNCTAD (UNCTAD, 2010) and WTO
contributed to formulation of the term “non-tariff measures”. Careful review of these definitions allowed formulating the following definition: NTMs are measures, other than tariffs, that are tightly connected with state (administrative) activity and influence prices, quantity, structure and/or direction of international flows of goods and services as well as resources used to produce these goods and services.

One of the main questions in study of the NTMs is a methodology of their measurement. The problems in measurement should be attributed to several factors including non-transparency of the NTMs, their variety, and disparity in influences. There are several generally accepted types of non-tariff barriers measurement like frequency measures, price-change measures, quantity measures, rates of assistance etc.

There are two common types of frequency measures: frequency ratio and import coverage ratio (Laird and Yeats, 1990). Both of them are based on calculation of portion of commodity lines subject to at least one NTB in total number of lines for the respective group of trade nomenclature. The frequency ratio is calculated by formula:

$$F = \frac{\sum D_i \times N_i}{N_T} \times 100$$

where \( N_i \) is category \( i \) of commodity in trade nomenclature group; \( D_i \) is dummy variable, \( N_i \) is general number of categories in trade nomenclature group, i.e. \( i = 1, \ldots, T \). Dummy variable is used as indicator of NTMs: \( D_i = \begin{cases} 1, & \text{if good in category } i \text{ is subject to at least one NTB;} \\ 0, & \text{otherwise} \end{cases} \)

For import coverage ratio, the value of imports of commodities subject to at least one NTB is used as a weight instead of number of categories. That allows introduce time factor in the measurement of NTMs, as well as better evaluate importance of particular NTMs for the trade as a whole.

This method of the NTMs calculation is intensively used by the UNCTAD as the most easily available, transparent, and universal measurement technique. Its major drawbacks include upward biased due to overstatement of existing measures, and difficulties in distinguishing the role of specific NTMs.

Measures based on evaluation of changes in price due to introduction of the NTMs are the most useful. Alternative to other measures, they allow direct comparison between influence of tariff and non-tariff trade barriers. Moreover, these measures are deeply rooted in international trade theory that formulates an influence of trade restrictions
in terms of price and quantity changes. The most known type of price-change measures is tariff equivalent that is calculated as growth in commodity price before and after use of the NTMs.

Despite unambiguous positive characteristics of this measure like its direct comparability with tariffs and realistic representation of the effect of the NTMs for a specific commodity, it is very difficult to use price-change indicator for a generic study of the NTMs in the country. Here, main problems are collection of necessary prices and differentiation of the NTMs’ impact from any other changes.

To summarise, frequency measures appears to be the most applicable technique for the measurement of the NTMs level in the country. Nevertheless, it still lacks comprehensiveness in identifying the role of separate NTMs as well as the severity of restrictions.

In this paper, we apply index of non-tariff measures intensity (NTMI), which is an extension of classical frequency measure. The NTMI shows the percentage of cases when the pre-selected NTMs are actually applied to the given number of tariff lines:

\[
NTMI = \left( \frac{\sum_{i=1}^{N} \sum_{j=1}^{J} NTM_{ij}}{J \cdot N} \right) \cdot 100,
\]

where \( NTM_{ij} \) is a dummy variable that takes a value of unity if the \( j \) type of the NTMs is applied to the tariff line \( i \) and zero otherwise. As before, \( N \) is a total number of considered tariff lines, \( i = 1, ..., N \), and \( J \) is a total numbers of considered types of the NTMs, \( j = 1, ..., J \).

This index indicates the percentage of used capacity for the non-tariff protection in the country. While frequency index equal to 100 means that each tariff line is subject to at least one types of the NTMs, while the \( NTMI = 100 \) means that that each considered type of the NTMs is applied to each tariff line. Also, if the \( NTMI > \frac{1}{J} \cdot 100 \), it means that there are at least one tariff line that is subject to more than one type of the NTMs.

2 NTMs in Ukraine: overview of health-related measures

In this study we focus on five NTMs applied in Ukraine and officially aimed at safeguarding life and health of people, animals and plants:
Information about applied NTMs is taken from legislation. In particular, the following regulations are used:

<table>
<thead>
<tr>
<th>Type of NTM</th>
<th>Basic legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterinary control</td>
<td>Law on Veterinary Medicine</td>
</tr>
<tr>
<td>Sanitary control</td>
<td>Law on Food Safety</td>
</tr>
<tr>
<td>Phyto-sanitary control</td>
<td>Law on Quarantine of Plants</td>
</tr>
<tr>
<td>Ecology control</td>
<td>Law on Environment Protection</td>
</tr>
<tr>
<td>Mandatory certification</td>
<td>Orders of State Committee on Technical Regulation and Consumer Policy on List of Products of Mandatory Certification</td>
</tr>
<tr>
<td></td>
<td>Orders of State Standardization Office on List of Products of Mandatory Certification</td>
</tr>
</tbody>
</table>

Methodology for construction of the database has been the following:

- Raw data (HS codes) are collected from legal texts
- Data are disaggregated to 9 or 10-digit HS code
- Mapping between HS classifications of different years using concordance tables
- Mapping into ISIC codes for sector analysis using concordance tables

Picture 1 presents index for non-tariff measures intensity in Ukraine estimated for above-mentioned five measures (NTMI-5) applied in 1996-2012. As shown, the intensity of usage of non-tariff measures clearly reduced over the period of observations. The first significant reduction occurred in 2000, the year of important deregulation reforms in the country. Later on, the NTMs usage somewhat revived, but remained lower than before-reform level. The second considerable reduction occurred in 2009 following Ukraine’s membership in the WTO.
The downward trend in the NTMI-5 is determined first of all by phyto-sanitary and sanitary controls, while veterinary control slightly increased over the period of observations and ecology control remained in 2012 was very close to its levels in 1996 after the period of higher coverage registered in 2003-2008. Mandatory certification expanded over the decade starting 1996 till 2005, and started to reduce afterwards as Ukraine progressed with the WTO talks.

Sectoral NTMI-5 is the highest for agriculture and food industry, which is in line with expectations (Picture 2). At the same time, the level of NTMI for these two sectors above 20 indicating that on average products in these sectors are subject to multiple NTMs.
The duplication of controls considerably reduced over the period of observations in both sectors showing progress in reforms. While in 1996 there were six sectors featuring index over 20, in 2012 there were only two such sectors.

Frequency measures of NTMs by sectors confirm that food industry and agriculture are subject to several controls (Pictures 3-7), although the situation gradually changed.

In the middle of 1990s, phyto-sanitary control was applied both to agricultural products and to food industry products, presumably produced from goods already checked at the previous stage of value chain. By 2012, phyto-sanitary control focus was primarily on agriculture, while veterinary and sanitary controls were mostly on food industry products.

Veterinary controls have always been concentrated in food and agriculture. Moreover, its coverage increased in late 2000s, likely due to reorganization of the controls.

Sanitary controls coverage reduced over the period of observations demonstrating trends similar to phyto-sanitary controls. The sanitary controls are concentrated in food and agriculture.

Ecology control seems not to replicate other three types of controls concentrating in such sectors as extractive industry, pharmaceutical production, metallurgy etc.

Mandatory certification witnessed the most dynamic changes. Its coverage has been expanding over the second half of 1990s, remained relatively stable or gradually
increasing till mid-2000s, and then started to reduce as Ukraine progressed in the WTO negotiations and started switching to technical regulation system, envisaged in the WTO Agreement on TBT. After Ukraine became a member of the WTO, the duplication of functions between mandatory certification and veterinary, sanitary and phytosanitary controls was largely removed, causing sharp reduction in number of food related products subject to mandatory certification. Also, elimination of mandatory standards facilitated the process of reduction in number of goods subject to mandatory certification.

**Picture 3: Phyto-sanitary control by sectors in 1996-2012**

*Source: author’s calculations*
Picture 4: Veterinary control by sectors in 1996-2012

Source: author’s calculations

Picture 5: Sanitary control by sectors in 1996-2012

Source: author’s calculations
Picture 6: Ecology control by sectors in 1996-2012

Source: author’s calculations

Picture 7: Mandatory certification by sectors in 1996-2012

Source: author’s calculations
3   Final remarks

Formally, some liberalization of non-tariff regulations occurred in Ukraine between 1996 and 2012 for safety-related NTMs – intensity of usage of NTMs dropped by 31%. However, this conclusion should be taken with some caution as we don’t assess complexity of process of going through controls or certification. We just note the fact that there is smaller number of tariff lines subject to studied controls in 2012 as compared to 1996.

In line with expectations, sectoral NTMs for studied five types of measures (veterinary, sanitary, phyto-sanitary and ecological controls and mandatory certification) are the highest for agriculture and food industry.

The downward trend in the NTMI-5 is determined by reduction of usage of phyto-sanitary and sanitary controls as well as mandatory certification, while veterinary control has even slightly expanded.

The duplication of controls considerably reduced in 1996-2012. While in 1996 there were six sectors featuring duplicating controls, in 2012 there were only two such sectors. It is important positive trend as it means more transparent and efficient system of controls gradually emerging in the country.

References


OECD (1997) Indicators of Tariff and Non-Tariff Trade Barriers
