

Comments on Galiya ISMURZINA Paper,  
Kazakhstan Agency for Statistics  
IARIW Conference, Beijing Friendship Hotel, Session 2B, 20 September  
2007

by

Helen Boss Heslop

formerly, Principal Economist for Ukraine, Kazakhstan, other CIS,  
the Vienna Institute for International Economic Studies (WIIW)  
[helenbossheslop@ntlworld.com](mailto:helenbossheslop@ntlworld.com)

Galiya Ismurzina's paper "Measuring the Non-Observed Economy  
in Kazakhstan"

1. The author works at the Statistics Agency of the Republic of Kazakhstan. She reports that Kazakhstan has, like other CIS countries, adopted the SNA and is measuring the country's NOE using the concepts formalized in the NOE Handbook and CISSTAT's background papers to it.
2. The most important point is that the Republic at present only attempts to measure three components of the NOE, (1) what she calls "hidden", i.e. what the OECD Handbook refers to as "underground" production (deliberately concealed from state authorities to avoid taxes and regulations), and (2) informal sector production (production for the market produced in unincorporated enterprises in the household sector or in other units that are unregistered and/or below a given size, and which have some market production).
3. Though she does not dwell on this, Kazakhstan like other CIS states has continued the Soviet tradition of including in the national product aggregate: (3) imputed Production of Households of goods for own-final use. (My previous author reports that Kazakhstan also has plans to estimate (4) illegal production, and I hope Ms Ismurzina will tell us which types of illegal activity will be included in future. Thus Kazakhstan's coverage of its NOE is improving.
4. The paper describes the Agency's methods for deriving output and employment in major sectors of the economy from two obligatory annual returns: large and mid-sized enterprises' Form 1-PF (Production and Financial Activity) and small enterprises' Form 2-MP (Main Indicators of Activity).
5. The key method presented is the adjustment for probable under-reporting of profits. A step-wise approach is used to estimate the GVA of registered enterprises declaring profits  $\geq 0$  but who attract attention because they have paid no corporate income tax. GVA is first estimated by summing its components: materials' costs, depreciation, social taxes,

wages and salaries, administrative expenses and these profits. Where enterprises have declared losses but have paid corporate tax during the fiscal year, profits are recalculated by multiplying prime costs by the *average profit rate of the given branch* at a national level.

6. Whichever number is the greater is the GVA for that enterprise used in further aggregation.
7. The next major adjustments are for output and incomes derived from non-reported employment, whether informal or underground. These involve the usual sources and methods: the above-mentioned Enterprise Survey, Tax data of registered individual entrepreneurs, and data from Sample Employment Surveys of labour force participation in informal activity, second jobs, part-time employment, etc. As in many countries, Kazakhstan assumes that the difference between the number of employed persons as per the National Employment Survey and the number found to be employed in the Enterprise Survey, plus numbers indicated in individuals' tax returns, may indicate employment in the NOE. Branch productivity is assumed to be identical as between the reported economy and the NOE, obviously an assumption that requires some justification.
8. According to the paper, just 5, highly-aggregated sectors are targeted in this 'Italian' approach: construction, trade and repairs of vehicles and consumer durables; hotels and restaurants; public, social and personal services.
9. It appears that Agriculture is not a target of this particular approach.
10. This yields large adjustments. E.g. the sector 'Trade and Servicing of Autos and Consumer Durables' had 311K employees in 2005 according to the Enterprise Survey; + Tax Committee data indicated an additional 226K, = 537K. However the Population Employment Survey's data indicated 1,097K full-time equivalent workers. By difference, the Agency finds NOE Trade and Servicing of Autos workforce to be  $1,097K - 537K = 560K$ , nearly half the adjusted total (46%).
  11. Gross Output and GVA are then scaled up, sector by sector, multiplying NOE full-time equivalent employment by the corresponding labour productivities from the Enterprise Survey.

#### Table: 'Share of NOE Income in Total Income, Kazakhstan 2005'

(see her tables in her paper, on the IARIW website)

12. Additional adjustments are made for the Informal Sector, to try to deal with the usual NOE problems:

under-reporting of output and revenue by registered incorporated firms  
non-registration of enterprises, whether for  
'underground' or  
'statistical' reasons

under-reporting of output and revenue / non-registration of employees in  
informal-sector (unincorporated) firms.

The output of the Informal Sector is estimated from Agency and other sources,  
but with special input from a Module of the Household Budget Survey designed  
to capture household production.

13. Because the output and incomes from Households' unincorporated enterprises are  
\* *already* estimated at branch level via Household Budget Survey data and Tax data, at  
the level of the National Accounts, the Agency only *additionally* adjusts for:  
employees working for individual entrepreneurs  
the mixed income of self-employed persons.

14. The scale of the adjustments is significant, particularly since Illegal Activity is not yet  
included in the Agency's mandate.

On the incomes side, at the level of the whole economy, imputations add 35% to total  
compensation of employees, and e.g. 54% in agriculture, 78% in trade and repair, 48% in  
hotels and catering, 35% in real estate and consumer services, 43% in transport. More  
notable, perhaps, is the 27% upward adjustment in mining, and 31% in manufacturing.

15. Finally, there is a Table for the Share of the NOE in GDP, 1998 - 2005.

## Table : Share of the NOE in Kazakh GDP by Sector

### COMMENTS ON ISMURZINA'S PAPER:

16. This table seems a preliminary version. There are quite a few blanks, and the Row  
for Real Estate and Consumer Services is obviously mislabelled. The early-year blanks  
for Agriculture are a bit perplexing. This may be because the numbers are in the wrong  
row, the real estate row. This table needs to be checked, and, if the data are available,  
filled out more completely.

(pl ignore gaps / errors in my numbering!)

20. The NOE output shares derived seem rather low, for example, a 20.2% NOE share of  
GDP for 2005, down suspiciously? monotonically from 30.3% in 1998.

21. What the estimates may reveal is low productivity in the sectors where underground  
and informal and household production are important. The low values may also reflect  
the burgeoning measured resource sector in the *denominator*.

22. As an example of the latter's growth (not of course discussed) between 1999 and

2004, Kazakhstan's oil production grew by nearly 15 percent every year, nearly doubling it.

23. Recovery of output and exports of metals like copper and minerals like uranium has also been very good in percentage terms in recent years. (The high concentration of incomes earned in the resource economy is of course not a subject of this paper.)

#### Kazakhstan Energy Production and Consumption, 1992-2007 US Dept of Energy

(downloaded from energy.org, Country Analysis Brief, US Dept. of Energy,

27. The versions of the paper made available to me employed both Russian and Kazakh acronyms, and it would seem an easy if critical step to fix the translations of them. Fortunately the author sent me the Russian version; until then some symbols which were in fact in Kazakh seemed to have mysterious undefined haceks and umlauts, possibly denoting growth rates, when in fact they were all simple accounting identities such as  $GVA = Output\ by\ volume - Intermediate\ Consumption$ . At the conference we decided these strange diacritical marks were the fault of Bill Gates et al. The translation could be improved, however.

28. Once the confusion between the three sets of acronyms was cleared up, it appeared that the Kazakh authorities employ standard concepts such as intermediate consumption, depreciation, etc.

29. The author does not discuss the frequency or quality of the various surveys, or how often e.g. the Enterprise Registers have been updated. I.e. what she thinks the 'Statistical Underground' may be. This qualitative information would have been interesting to hear.

30. Is not Kazakhstan's NOE output share also suspiciously low in comparison to other Central Asian economies, as estimated in Khomenko's paper?

31. Is the low share caused more, in her view, by the successes of energy and metals production in the booming reported sector, or by successful state efforts to crack down on tax evasion and non registration? At the session there was not much time to answer this, but Ismurzina may wish to take these obvious questions into consideration in future versions.

32. The author might like to comment on the logic behind the Agency's assumption that gross output per employee in a given sector according to the Enterprise Survey should be used to derive GVA in the NOE, by multiplication by the estimated number of full-time equivalent employees in the NOE, which are derived from the Employment of the Population Survey.

33. I.e. it could be argued there should be some correction factor made for probable lower output per worker in underground, informal and household sectors. On the other

side, productivity numbers from the reported sector may be seen as a crude counterweight to probable under-reporting.

34. In the NOE Incomes table (compensation of employees), there are “consumer services” in row 12, and “personal services” in row 16. These categories seem to overlap, and the author should explain why they are separate and how they differ.

35. A minor point dear to the commentator’s heart: a category ‘non productive services’ is listed among enterprises’ costs. That term is a holdover from Soviet economics that is to be avoided, especially since sovereign producers presumably ordered these inputs. They qualify as intermediate, like any other enterprise-sector cost item, so they cannot be non-productive, any more than the services of the enterprises’ workers are.