BANK OF CANADA
BANQUE DU CANADA

Bank of Canada Monthly Research Update

February 2015

This monthly newsletter features the latest research publications by Bank of Canada economists. The report includes papers appearing in external publications and working papers published on the Bank of Canada's website.

PUBLISHED PAPERS

In Press

Cociuba, Simona E., and Alexander Ueberfeldt, "Heterogeneity and long-run changes in aggregate hours and the labor wedge", Journal of Economic Dynamics and Control, Volume 52, March 2015, Pages 75–95

Forthcoming

Allen, Jason, James Chapman, Federico Echenique, and Matthew Shum, "Efficiency and Bargaining Power in the Interbank Loan Market", International Economic Review

Arango, Carlos, Kim P. Huynh, and Leonar Sabetti, "Consumer payment choice: Merchant card acceptance versus pricing incentives", Journal of Banking and Finance

WORKING PAPERS

Cao Shutao, and Sharon Kozicki, "A New Data Set of Quarterly Total Factor Productivity in the Canadian Business Sector", Bank of Canada Working Paper 2015-6

Cheung Calista, Dmitry Granovsky, and Gabriella Velasco, "Changing Labour Market Participation Since the Great Recession: A Regional Perspective", Bank of Canada Discussion Paper 2015-2

Friedrich Christian, "Does Financial Integration Increase Welfare? Evidence from International Household-Level Data", Bank of Canada Working Paper 2015-4

Kuncl Martin, "Securitization under Asymmetric Information over the Business Cycle", Bank of Canada Working Paper 2015-9

Pandey Radhika, Gurnain Pasricha, Ila Patnaik, and Ajay Shah, "Motivations for Capital Controls and Their Effectiveness", Bank of Canada Working Paper 2015-5

Pasricha, Gurnain, Matteo Falagiarda, Martin Bijsterbosch, and Joshua Aizenman, "Domestic and Multilateral Effects of Capital Controls in Emerging Markets", NBER Working Paper #20822 (IFM)

Serena Jose Maria, and Garima Vasishtha, "What Drives Bank-Intermediated Trade Finance? Evidence from Cross-Country Analysis", Bank of Canada Working Paper 2015-8

Xie Jia, "Information, Risk Sharing and Incentives in Agency Problems", Bank of Canada Working Paper 2015-7

ABSTRACTS

Heterogeneity and long-run changes in aggregate hours and the labor wedge

From 1961 to 2007, U.S. aggregate hours worked increased and the labor wedge—measured as the discrepancy between a representative household′s marginal rate of substitution and the marginal product of labor—declined substantially. The labor wedge is negatively related to hours and is often attributed to labor income taxes. However, U.S. labor income taxes increased since 1961. We examine a model with gender and marital status heterogeneity which accounts for the trends in the U.S. hours and the labor wedge. Apart from taxes, the model′s labor wedge reflects non-distortionary cross-sectional differences in households′ hours worked and productivity. We provide evidence that household heterogeneity is important for long-run changes in labor wedges and hours in other OECD economies.

Efficiency and Bargaining Power in the Interbank Loan Market

Using detailed loan transactions-level data we examine the efficiency of an overnight interbank lending market, and the bargaining power of its participants. Our analysis relies on the equilibrium concept of the *core*, which imposes a set of no-arbitrage conditions on trades in the market. For Canada we show that while the market is fairly efficient, some degree of inefficiency persists throughout our sample. The level of inefficiency matches distinct phases of both the Bank of Canada’s operations as well as phases of the 2007- 2008 financial crisis, where more liquidity intervention implies more inefficiency. We find that bargaining power tilted sharply towards borrowers as the financial crisis progressed, and towards riskier borrowers. This supports a nuanced version of the Too- Big-To-Fail story, whereby participants continued to lend to riskier banks at favorable rates, not because of explicit support to the riskier banks provided by governmental authorities, but rather due to the collective self-interest of these banks.

Consumer payment choice: Merchant card acceptance versus pricing incentives

Using transaction-level data from a three-day shopping diary, we estimate a model of consumer payment instrument choice that

disentangles the effect of merchant card acceptance from credit card pricing incentives (rewards) at the point-of-sale. The lack of merchant card acceptance plays a large role in the use of cash, especially for low-value transactions (less than 25 dollars). Participation in a credit card rewards program induces a shift toward credit card usage at the expense of both debit cards and cash. In contrast, changes in the amount of rewards (ad valorem) has a small or inelastic effect on the probability of paying with credit cards. Our findings highlight the importance of the two-sided nature of retail payment systems and provide key insights into consumer and merchant behaviour.

A New Data Set of Quarterly Total Factor Productivity in the Canadian Business Sector

In this paper, a quarterly growth-accounting data set is built for the Canadian business sector with the top-down approach of Diewert and Yu (2012). Inputs and outputs are measured and used to estimate the quarterly total factor productivity (TFP). In addition, the estimates of annual TFP growth by Diewert and Yu (2012) are revised and updated to reflect changes in the new national economic accounts and national balance-sheet accounts. The quarterly series also provide suitable data for studying short-run dynamics. To demonstrate, a simple vector autoregressive model is estimated to study the responses of hours worked and investment to TFP shocks. Hours worked drop and investment rises in reaction to a positive TFP shock.

Changing Labour Market Participation Since the Great Recession: A Regional Perspective

This paper discusses broad trends in labour force participation and part-time employment across different age groups since the Great Recession and uses provincial data to identify changes related to population aging, cyclical effects and other factors. The main population age groups examined are youth (aged 15-24), prime age (25-54) and older (55 and above). Six main findings are reported. First, aging has been the most important driver of reduced participation. On their own, aging effects would have depressed participation rates by more than they fell between 2007 and 2014, and have been partly offset by rising participation rates of older workers. Second, shifting age composition has had the largest impact on the Atlantic provinces, owing primarily to their shrinking prime-age populations as some workers have migrated west. Third, a considerable part of the overall participation rate decline since 2007 reflects a greater share of prime-age and youth populations that are out of the labour force for various reasons including school, illness, and family responsibilities. These changes appear to be driven by both structural and cyclical forces, although the relative importance of each is unclear. Fourth, effects associated with “discouraged workers” have been negligible. Fifth, youth participation rates have fallen the most, by 2.8 percentage points since 2007, with 9 per cent of the decline reflecting purely higher school enrolment rates. Sixth, weak business conditions appear to be the main driver behind the shift toward part-time employment since the Great Recession, with involuntary part-time work explaining almost the entire increase since 2007.

Does Financial Integration Increase Welfare? Evidence from International Household-Level Data

Despite a vast empirical literature that assesses the impact of financial integration on the economy, evidence of substantial welfare gains from consumption risk sharing remains elusive. While maintaining the usual cross-country perspective of the literature, this paper explicitly accounts for household heterogeneity and thus relaxes three restrictive assumptions that have featured prominently in the past. By making use of international household-level data and a subjective measure of financial well-being, the analysis takes into account idiosyncratic shocks to the household, allows for a household-specific evaluation of labor income risk and facilitates explicit tests of the underlying insurance channels. Using two balanced panels of more than 17,000 and 31,000 households from up to 22 European countries over the periods 1994-2000 and 2004-2008, respectively, I first document a negative welfare effect arising from labor income risk. I then show that financial integration significantly mitigates this effect for the average household in the sample. Finally, I examine the underlying insurance channels and find that, during the 1990s, the benefits of financial integration occurred primarily in the form of better access to credit for households with only weak ties to the financial system. During the 2000s, however, the largest gains from financial integration emerged on the asset side and benefited in particular households that had already invested in financial markets.

Securitization under Asymmetric Information over the Business Cycle

This paper studies the efficiency of financial intermediation through securitization in a model with heterogeneous investment projects and asymmetric information about the quality of securitized assets. I show that when retaining part of the risk, the issuer of securitized assets may credibly signal its quality. However, in the boom stage of the business cycle this practice is inefficient, information on asset quality remains private, and lower-quality assets accumulate on balance sheets of financial intermediaries. This prolongs and deepens a subsequent recession with an intensity proportional to the length of the preceding boom. In recessions, the model also produces amplification of adverse selection problems on resale markets for securitized assets. These are especially severe after a prolonged boom period and when securitized high-quality assets are no longer traded. The model also suggests that improperly designed regulation requiring higher explicit risk retention may become counterproductive due to a negative general-equilibrium effect; i.e., it may adversely affect both the quantity and the quality of investment in the economy.

Motivations for Capital Controls and Their Effectiveness

We assess the motivations for changing capital controls and their effectiveness in India, a country with extensive and long-standing controls. We focus on the controls on foreign borrowing that can, in principle, be motivated by macroprudential concerns. We construct a fine-grained data set on capital control actions on foreign borrowing in India. Using event study methodology, we assess the factors that influence these capital control actions, the main factor being the exchange rate. Capital controls are tightened after appreciation, and eased after depreciation, of the exchange rate. Macroprudential concerns, measured by variables that capture systemic risk buildups, do not seem to be a factor shaping the use of capital controls. To assess the impact of controls, we use both event study and propensity score matching methodologies. Event study methodology suggests no impact of capital controls on most variables evaluated, but reveals limited evidence that capital controls relieve currency pressures in the short term. However, even this limited evidence disappears once selection bias is controlled for.

Multilateral Effects of Capital Controls in Emerging Markets

This paper assesses the effects of capital controls in emerging market economies (EMEs) during 2001-2011, focusing on cross-country spillovers of changes in these controls. We use a novel dataset on weighted changes in capital controls (and currency-based measures) in 18 major EMEs. We first use panel VARs to test for effectiveness of own capital controls which take into account the endogeneity of such controls. Next, using near-VARs, we provide new evidence of multilateral effects of capital controls of the BRICS. Our results suggest a limited domestic impact of capital controls. Outflow easing measures do not have a significant impact on any of the variables in the model. Inflow tightening measures increase monetary policy autonomy (measured by the covered interest differential), but at the cost of a more appreciated exchange rate. These measures are therefore not effective in allowing EMEs to choose a trilemma configuration with a de-facto closed capital account, larger monetary policy autonomy and a weaker exchange rate. We do not find a clear difference between countries with extensive and long-standing capital controls (India and China) and other countries. Capital control actions in BRICS (Brazil, Russia, India, China and South Africa) had significant spillovers to other EMEs during the 2000s in particular via exchange rates. Multilateral effects were more important among the BRICS than between the BRICS and other, smaller EMEs, particularly in the pre-global financial crisis period. They were more significant in the aftermath of the global financial crisis than before the crisis. This change stems in particular from the fact that spillovers from capital flow policies in BRICS countries to non-BRICS became more significant in the post-global financial crisis period. These results are robust to various specifications of our models.

What Drives Bank-Intermediated Trade Finance? Evidence from Cross-Country Analysis

Empirical work on the underlying causes of the recent dislocations in bank-intermediated trade finance has been limited by the poor availability of hard data. This paper analyzes the key determinants of bank-intermediated trade finance using a novel data set covering ten banking jurisdictions. It focuses on the role of global factors as well as country-specific characteristics in driving trade finance. The results indicate that country-specific variables, such as growth in trade flows and the funding availability for domestic banks, as well as global financial conditions and global imports growth, are important determinants of trade finance. These results are robust to different model specifications. Further, we do not find that trade finance is more sensitive to global financial conditions than other loans to non-bank entities.

Information, Risk Sharing and Incentives in Agency Problems

This paper studies the use of information for incentives and risk sharing in agency problems. When the principal is risk neutral or the outcome is contractible, risk sharing is unnecessary or completely taken care of by a contract on the outcome. In this case, information systems are ranked according to their informativeness of the agent's action. When the outcome is noncontractible, however, the principal has to rely on imperfect information for both incentives and risk sharing. Under the first-order approach, we characterize a problem-independent ranking of information systems, which is relaxed from Gjesdal's (1982) criterion. We also find sufficient conditions justifying the firstorder approach.