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Divergent Euro Area Recoveries STEFAN DE VILLIERS

In a little over a month, the European Central Bank (ECB) is expected to raise interest rates for the first time in over a decade. The last time this happened was July 2011, when an optimistic view on recovery from the financial crisis sent the ECB deposit rate to 0.75%. Tides turned quickly, though, and since 2014, that same rate has been negative. But in 2022, with inflation figures projected to hit an record-high annual rate of 6.1% in the euro area, the hawks are taking over again.

Christine Lagarde has indicated that the ECB is “likely to be in a position to exit negative interest rates” by the end of September, meaning at least a half-percent increase. In the central banking world of cautious signaling, that quote is practically a guarantee. Markets expect rates to be a full percentage point up by the end of the year. But with pandemic recovery slacking, war in Ukraine passing the 3-month mark, and food and energy supply chain disruptions leading to shortages across the world, can everyone afford this hike?

Consider the euro area economies of Germany and Estonia. On one hand, a 2022 forecast of 83 million people, a \$4.3 trillion GDP, and 3.3% unemployment. On the other hand,

1.3 million people, a \$37 billion GDP, and 6.8% unemployment. (Assigning the hands is left as an exercise for the reader.) Both have high exposure to Russian energy markets, with Germany and Estonia importing 49% and 79%, respectively, of their natural gas from Russia in 2019. The latter’s greater commitment to cutting off that supply (having in April already planned to cease Russian gas imports by the end of the year) in large part explains its 11.2% inflation rate forecast for 2022, compared to Germany’s 6.5%.

Double-digit inflation figures certainly necessitate a policy response. However, policy must look different in a country with \$51k GDP per capita than another half as rich with weaker fundamentals.

One needn’t look much further than investment data to figure this out. In Autumn 2021, forecasts of 2022 investment growth were 3.5% in Germany and 2.5% in Estonia. By Spring 2022, those had been adjusted to 0.8% and -7%, respectively. As interest rate hikes are priced in and it becomes uniformly more expensive to borrow throughout the euro area, Estonia will only fall further behind in terms of investment.

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AI and UBI in Seattle NANDINI DAGA

As a hub of tech start-ups and giants, Seattle is leading the AI revolution, but it may be unprepared for what this brings. With industry powerhouses like Microsoft, Amazon, and Oracle, and all its tech startups (many of which are born at UW or are being developed by alumni) Seattle is one of the top cities in the United States when it comes to the integration of artificial intelligence. A visit to any Foster Business School-led career fair will show just how much AI is becoming essential.

Yet as this innovation marches forward, the city is likely ill-equipped for the consequences it brings. Seattle is already unprepared for its current issues.

The city has the third largest homeless population in the United States, and its competitors for 1st and 2nd place are New York and Los Angeles, respectively. It’s worth noting that New York has more than eight times the population of

Seattle, and Los Angeles nearly four. Seattle is already failing its homeless population—will it be able to handle the blow that AI could deal to workers?

As the technology develops, we should anticipate rising unemployment and a transition period as workers either become discouraged or move to find new jobs that are out of reach of AI. Manufacturing jobs will continue to be lost to automation as machines gain bodies that can move like humans (as showcased by companies like Boston Dynamics), and hands that have a sense of touch and the dexterity of a human (like the model being tested with GelSight technology). Even white-collar jobs that were previously thought of as untouchable are under fire. Of course, the engineers and sales representatives and programmers will enjoy growing wealth and steady jobs, but those without higher education and already struggling to make Seattle’s

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At the same time as investment falls in Estonia, its real effective exchange rate relative to its main trading partners has increased more than 7% in the last year, compared to an estimated euro area average change of -4%. In other words, as the rest of the euro area finds it easier to export goods, Estonia suffers from much higher relative prices domestically than abroad. As interest rates rise, exchange rates will rise further and Estonian exports will suffer more.

In other words, the hawkish euro policies well-suited to addressing inflation in countries like Germany bring a wealth of negative externalities for smaller, more distressed countries like Estonia. Inflation is undeniably a problem in Estonia and must be addressed, but it seems likely that raising rates in lockstep with every other euro area country could do just as much harm as good. Certainly it will slow down the country's already lagging recovery from the pandemic recession.

Some may take this data as justification for reduced economic integration in the region. If Estonia suffers from the joint monetary policy of the Economic and Monetary Union and is simultaneously constricted fiscally by the EU Stability and Growth Pact (SGP), there is a case to be made that the country is better off without the euro. However, even if independent monetary policy were the silver

bullet to Estonia's recovery challenges, now is not the moment to implement such radical economic transformations. There is not enough time and too much uncertainty already.

The answer, it seems, lies in greater wealth transfers within the EU and euro area. Across the entire NextGenerationEU financial framework covering 2021 to 2027, Estonia was pre-allocated \$4.9 billion in non-agriculture funding. Spreading that funding over seven years stretches it thin, with likely no more than 2% of Estonia's GDP, if that, available in funding in the current year. An effective and equitable European recovery from the pandemic recession and war-time disruptions will require greater investment in Estonia and all those countries most vulnerable to the effects of the euro's recovery process.

In the wake of the 2008 financial crisis, Estonia saw tepid growth that meant its standard of living was no higher in 2016 than it had been before the crisis—almost 8 years of lost progress. This time around, it is the responsibility of European policymakers to ensure that this does not happen again, in Estonia or anywhere else. The smallest euro area countries cannot suffer to accommodate the largest.

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ever escalating rent will find themselves in even deeper trouble. As AI grows in its capability to make decisions, its power to replace workers grows.

In response, Seattle should implement a long-term Universal Basic Income (UBI) program to compensate for projected job losses and stabilize the community. At the very least, it should test the solution.

The argument is often made that as our country transitioned from primarily employing human labor in the agricultural sector to the manufacturing sector to the service sector, workers were always able to find new jobs. However, the timeframe of that transition has been greatly reduced in this new period of automation. The decline of manufacturing jobs from about 33% of total jobs to less than 10% happened over the course of around 50 years. Automation in the service sector will likely happen faster, with the pandemic decreasing companies' reluctance to use AI technologies to innovate. We have already seen a substantial transition in services, with examples in online ordering, Amazon's Go Store, and, broadly, less human interaction needed for purchases of any kind. Those most vulnerable to this transition will face unemployment, and may be unable to pursue further education to get a job that has escaped the line of fire. As the home of tech giants like Microsoft and Amazon, Seattle will feel the effects of automation, and be leading it.

UBI would allow for the effects of this increase in unemployment to be mitigated. Much like the stimulus checks of the COVID-19 pandemic, the money would keep consumption of domestic goods from plummeting, stopping an economic spiral, and keep people out of poverty (which is already expensive for the government). It could even give students a cushion to pursue their education further, allowing them to rejoin the workforce or start off at a higher level than they would have if they were unsupported by UBI. It can provide financial independence for homemakers. It could help students do better. It allows for greater agency than programs like food stamps.

The major argument against UBI is that it will either cause people to be unwilling to work or that it is too expensive. However, the expenses of UBI will be offset by the general increase in production of Seattle and the reduction of need for social services currently used by those who the program will benefit most. As for the idea that it will disincentivize working, the COVID-19 pandemic seemed to prove the opposite. The labor force participation rate is steadily returning to what it was pre-pandemic, even with a fourth stimulus check on the way in several states. Seattle is a perfect testing ground for the nation, with no income taxes and a huge number of people that would benefit from UBI. If our current programs are failing our vulnerable populations, we need something new.

Taxing Crime: An Honors Thesis ECONOMIZER EDITORS

The following is a review of a UW Economics honors thesis paper by Simon LaVassar Schumacher, completed in May 2022 and presented at this year's UW Undergraduate Research Symposium.

In his paper, "Crime and Returns to Legal Work: How Changes in State-level Taxation Affect Crime Rates," Simon Schumacher extends academia's age-old fascination with the study of crime by introducing interactions with income tax. As taxes go up, he asks, do property crime rates follow?

Schumacher's analysis begins with a basic model in which crime rates are directly proportional to the benefits of crime minus the opportunity costs associated with crime. In other words, as crime becomes more lucrative compared to legal work, more individuals will be motivated to commit crimes rather than earning their livings legally. (Note: legal work in this case refers to work that is legal, not courtroom endeavors.) Similarly, as legal work becomes less financially appealing, "would-be criminals" lose their qualifiers. The model is intuitive. Whether or not it holds is a different question. It is possible that criminals are generally less motivated by proper evaluation of potential returns to legal work than they are by other social or economic factors. With this in mind, Schumacher sets out to test the model as it relates to taxation.

Using crime data from the FBI for all fifty states and the District of Columbia alongside data from the US Census Bureau on state-level taxes and expenditures, Schumacher sets up a fixed effects model that examines more than two dozen variables, including property crime rates. He acknowledges that crime rates are imperfect, as not all

crime is reported and catalogued by the FBI, but assumes that what is reported can serve as a sufficiently reliable proxy for the underlying realities. Schumacher's analysis covers most of a 20-year period starting in 1995.

The results are interesting. Property crime, Schumacher reports, is negatively correlated with both total tax rates and individual income tax rates at the state level. This doesn't match the earlier model, as one would expect decreased returns on legal work to increase crime rates, not decrease them. However, the results make more sense once Schumacher factors in the expenditure of money raised through increased taxes. When one regresses crime rates on taxation as well as police spending and public welfare spending, it is the latter two variables that have the only significant explanatory effect.

This suggests an intuitive result: as taxes increase in a given state, spending increases on law enforcement activities, which in turn dampens criminal activity. Taxation, at this aggregate level, has little to no direct effect on crime. The result thus doesn't say much about the validity of the economic model of crime that Schumacher presents, but it does allow one to see the potency with which policy intervention can discourage crime.

Schumacher acknowledges this result and notes that it is important to gather nuanced data on crime at the individual level in order to better test a model of crime. When one can make connections between the costs and benefits that individuals face with regards to crime, while also factoring in macroeconomic variables at play, it will be easier to comprehensively address criminal motivations.

An Interview with Professor Brian Greaney ECONOMIZER EDITORS

When Professor Brian Greaney first started college at the University of Notre Dame, he expected to leave with a bachelor's degree in biology. Some months in, finding the lab environment to be an imperfect fit, he switched to political science. When that proved less quantitatively rigorous than he wanted, he turned to economics. His impression? "Very challenging" and "very mathematical." That is to say, he liked it. And to the benefit of everyone in economics at the UW, he stuck with it.

Greaney graduated from Notre Dame in 2012, spent two years as a research assistant at the St. Louis Fed, then started a PhD in economics at Yale. In 2020, he joined the UW as an assistant professor. The EUB sat down with him to discuss his path to the UW, his research, and his approach to teaching.

This article is the third in a series highlighting new professors in the UW economics faculty. For the previous arti-

cles on Professors Joshua Jacobs and Emma Riley, see our Fall 2021 and Winter 2022 editions, respectively.

Professor Greaney's first major exposure to economics research came during his pre-doctoral position at the St. Louis Fed. In his own words, he "would not have been prepared for graduate school without it." Specifically, he learned much about the life cycle of long-term research projects and the role of data in those projects. Content-wise, the pre-doc was helpful too. Having focused on development economics as an undergraduate student, he added more knowledge on macroeconomics and wealth distributions, topics that came to dominate his PhD studies.

At Yale, Greaney latched on to work that many at the school were already doing on spatial analysis. While it's well-understood that economic activity and growth varies across regions, less work has been done to find the effect that such uneven growth has at the household level. With his thesis,

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Greaney aimed to uncover that effect. Among the conclusions in his job market paper, titled “The Distributional Effects of Uneven Regional Growth,” was the result that different wage and house price growth rates between cities have “substantial effects on the wealth distribution.”

If Greaney’s pre-doc introduced him to economics research, his doctoral experience shaped his approach to it. At the start, he “thought about economics the wrong way,” seeking to excel by simply honing models in pre-existing research. By the end, he had learned that progress in research is driven by questions. “Your research should follow your question,” he says, “not the other way around. Build on the work that others have done before you, but know why you are doing it.”

Greaney is currently polishing his job market paper. With his next research project, he hopes to focus on risk as it relates to uneven regional growth. In particular: What kind of risks do homeowners face from buying homes in particular markets? How do housing policies help them deal with that risk?

Greaney is from the Pacific Northwest originally, having grown up in Central Oregon. So, when the UW offered him a job, it seemed like a good fit. He likes the school’s environment, its flexible academic structure, and the fact that its being a state school makes it accessible to a wide range of students. Teaching here, he says, is much different from teaching as a graduate student. Most notably, he has more control over the content he’s teaching. In his first winter quarter at the UW, he was handed the reins to his own

course: ECON 412, which he created to examine the interaction between the macroeconomy and income and wealth distributions. Greaney also teaches two graduate-level courses on empirics, theory, and analysis as they relate to macroeconomics. In all of his classes, he has a simple philosophy: “Challenge students and get them to learn from each other.”

Asked about the comparative advantage of a degree in economics, Greaney says that it teaches students to “think very carefully about causality,” while also doing its part to shape them into more informed citizens. His advice to those currently in the economics major is to take advantage of the department’s course variety to discover new interests, to connect with and talk to other students in the department, and to use resources like online seminars to expand knowledge across the economics discipline.

To close, we asked Professor Greaney to come up with a niche economics topic that he would enjoy teaching a class on. His answer? “Cryptocurrency. I don’t have any myself, but I would love to teach others about it.” We’ll keep our eyes on the course listings.

EUB NOTICES:

Autumn Quarter Events: In the autumn quarter, the EUB will be hosting various events, including the quarterly Paul Heyne seminar. Keep an eye out for those events in your email.

Economics Tutoring: The EUB offers free tutoring every weekday at various times every quarter! Check the schedule on the EUB website to see tutoring times. If you need help with an upper level class, make sure you check the website to see which tutor can help.

Contribute to the Economizer: The Economizer will be seeking guest writers for our autumn quarter issue. Interested writers should check their emails from the department in early autumn quarter for submission instructions.

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The articles herein do not necessarily reflect the views of the department or its faculty.

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