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Baltimore Business Review
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TOWSON'S FED CHALLENGE TEAM REACHES SEMIFINALS FOR FIRST TIME IN UNIVERSITY HISTORY

For the first time, Towson University advanced to the semifinals of the College Fed Challenge, marking a milestone for the College of Business and Economics (CBE). Competing against 139 schools from 36 states, Towson's success highlights the growing strength of CBE's economics programs and the exceptional talent of its students.

The members of this year's team selected to give the oral presentation include **Hannah Chang** (Team Leader), Financial Economics '27, **Liam Walker**, Economics & Political Science '27, **Luke Ober**, Mathematical Economics '26, **Nolan Wilson**, Finance with Business Law Minor '27, **David Roda Da Costa**, Economics & History with Mathematics Minor '28, and **Olohittare Aghomon** (Alternate), Financial Economics with Information Systems Minor '28. The Fed Challenge team is supervised by **Dr. Shuwei Zhang**, Assistant Professor of Economics.



Before joining CBE, Dr. Prabakar Kothandaraman served as Dean of the School of Business at SUNY Oswego, where he was also a tenured professor of marketing. He brings nearly six years of deanship and over a decade of executive leadership to CBE. Under his guidance, SUNY Oswego achieved AACSB reaccreditation, expanded graduate programs, and launched a top-ranked online MBA in Healthcare Administration. He led the renaming of the school to the College of Business and Entrepreneurship and introduced the first Executive Master's in Sales Leadership at the Russ Berrie Institute. A recognized thought leader, Dr. Prabakar champions strategic planning, curriculum innovation, and student success through a future-focused, impact-driven approach to business education.



Message from the Dean

TOWSON UNIVERSITY, COLLEGE OF BUSINESS AND ECONOMICS

Dear Colleagues and Friends,

It is my pleasure to introduce this year's edition of the *Baltimore Business Review*. The College of Business and Economics at Towson University remains committed to advancing scholarship, supporting student development, and strengthening our engagement with Maryland's business community.

The faculty research articles in this issue examine timely topics such as artificial intelligence and workforce strategy, consumer protection and entrepreneurship in Maryland, and monetary policy in an environment of economic uncertainty. Research presented at our annual Development and Research Conference further highlights the breadth of inquiry taking place across the College and its relevance to regional and national conversations.

Our student research articles demonstrate the transformative power of experiential learning. Undergraduate researchers are applying quantitative methods to global health and development challenges, while members of the Towson University Investment Group are gaining practical experience in portfolio strategy, financial modeling, and professional certification preparation. These opportunities reinforce our goal of preparing graduates who are analytical, adaptable, and ready to lead in a rapidly evolving business environment.

This issue also includes perspectives from industry and faculty focused on professional readiness. Our Business Excellence faculty outline an evidence-based approach to preparing students for the workplace through experiential learning and the development of essential professional skills. Industry perspectives underscore the importance of adaptability in an evolving workforce. Together, these efforts reflect the College's commitment to preparing graduates who are ready to contribute from day one.

I extend my appreciation to everyone who contributed to this issue of the *Baltimore Business Review*. Their time and dedication make this publication possible. We also thank our readers for their continued engagement and welcome your feedback.

Sincerely,

Prabakar Kothandaraman, Ph.D.
Dean, College of Business and Economics



Acceleration Without Alignment: Rethinking HR Outsourcing in the U.S.

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Peter Lamousin
Undergraduate student

As technologies continue to transform the workplace, demand for human resource (HR) outsourcing has grown rapidly. According to a recent market research report, the global HR outsourcing market was valued at 261.9 billion U.S. Dollars in 2024 and is projected to grow at an annual rate of 5.48% over the next 10 years (Dhapte, 2025). In the U.S., Automatic Data Processing (ADP) was ranked as a global leader in multi-process HR outsourcing in 2024 in terms of its scale, service scope, and consistent market impact (Everest Group, 2024). ADP reported \$19.2 billion in revenue in 2024, a 7% increase from 2023, according to its annual report filed with the Securities and Exchange Commission (ADP's 10-K report, 2024), showing the strength of the U.S. and global HR outsourcing market. This growth in HR outsourcing is driven not only by technological developments such as artificial intelligence (AI) adopted by both outsourcing clients and organizations that keep HR in-house (Rudko et al., 2025), but also by vendor-driven narratives that construct problems such as the so-called "war for talent" to market outsourcing as the solution (Cappelli & Schwartz, 2024; Johnson et al., 2014). In this article, we define Artificial Intelligence (AI) as computer systems designed to perform tasks that typically require human intelligence, such as learning, reasoning, and decision-making (Russell & Norvig, 2021). In HR, AI refers to software that screens résumés, schedules interviews, sources potential recruits, tracks applicants, or analyzes workforce data.

Despite the rise in HR outsourcing and the emergence of a human capital management industry worth hundreds of billions of U.S. dollars (Dhapte, 2025; Cappelli & Schwartz, 2024), the number of empirical studies documenting the benefits of HR outsourcing remains scarce. Although a few systematic reviews of HR outsourcing have been published (Xiao et al., 2024; Sakib et al., 2023), they remain fragmented in documenting whether HR outsourcing delivers strategic advantages, and they largely overlook the perspectives of multiple stakeholders beyond the client organizations. More importantly, no systematic review has focused specifically on the U.S. context. To address this gap, we conducted a systematic review based on 11 empirical studies, following the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) 2020 principles (Page et al., 2021) to provide practitioners with transparent, evidence-based insights into the strategic value of HR outsourcing.

Method

Due to the interdisciplinary nature of HR outsourcing, we utilized the Scopus database to search for relevant studies. Prior bibliometric research shows that Scopus has a broader coverage of business and social sciences journals (Singh et al., 2021) compared with subject-specific databases such as PsycInfo. Because HR outsourcing research spans business, organizational behavior, and psychology, Scopus is better suited to capture the full spectrum than a psychology-specific database like PsycINFO. The following keywords were used to identify potential studies for inclusion in the review: "Human Resource Outsourcing", "effectiveness", "impact", "performance", "benefits", and "professional employer organization". We found a total of 108 peer-reviewed journal articles using a combination of the above keywords as article titles. We further applied the inclusion criteria of U.S. context, empirical, not conceptual or review, which left a total of 11 articles for inclusion in the systematic review. Figure 1 depicts the PRISMA flow diagram to select articles for inclusion in the review. The list of references marks the studies included in the review with an asterisk.

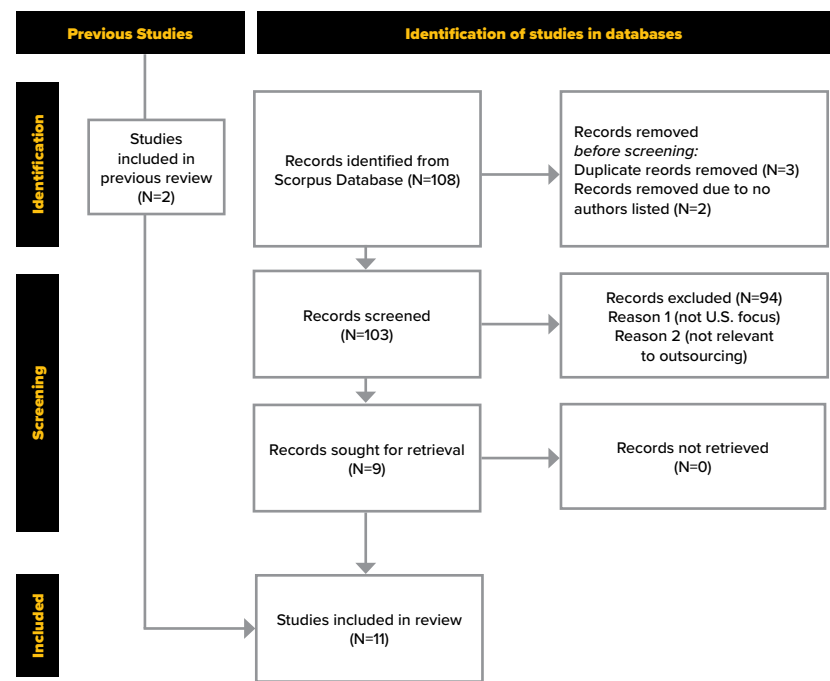
Results

In the following paragraphs, we present the findings of our review through three major theoretical frameworks: transaction cost economics (TCE) model, the resource-based view (RBV) of the firm, and institutional logic.

Transaction cost economics (TCE). According to Williamson (1981), organizations must define their efficient boundaries by deciding which activities are best kept in-house and which can be contracted out. In addition, Williamson (1981) proposed that organizations would gain advantages in production cost and governance cost when they outsource non-specific assets, such as standardized tasks (e.g., payroll processing) while retaining specific assets (e.g., talent management). Our review supports both aspects of the TCE model. Outsourcing routine HR tasks to achieve efficiency (Gospel & Sako, 2010) led to cost savings in the short-term (e.g., Klaas et al., 1999; Hilger, 2004; Butler & Callahan, 2012), while larger firms face diminishing returns when customization erodes efficiency. Small and medium-sized enterprises were found to improve performance from outsourcing routine HR functions, as doing so allowed them to redirect resources toward entrepreneurial activities (Irwin et al., 2018).

Resource-based view (RBV). According to the RBV of the firm (Barney, 1991), organizations should retain HR functions that provide competitive advantages while outsourcing

Figure 1: PRISMA 2020 Flow diagram of the study selection process (Adapted from Page et al., 2021)



routine or easily imitated tasks. We found partial support for this framework in our review. In U.S. firms, outsourcing non-core HR activities improved performance, but outsourcing core HR reduced it (Gilley et al., 2004; Gospel & Sako, 2010). Similarly, while professional employer organization (PEO) arrangements give smaller firms access to resources they lack, their strategic gains remain elusive (Klaas et al., 2005a, 2005b). HR professionals often struggled to act as strategic partners when outsourcing was in place, partly because their role shifted toward managing vendors rather than leading HR strategy (Klaas, 2008).

Institutional logic. From an institutional perspective, organizations may outsource HR not only for efficiency but also for legitimacy, by conforming to peer practices, regulatory pressures, or shareholder expectations (DiMaggio & Powell, 1983). However, the evidence supporting an institutional logic is mixed in our review. In a case study involving a German subsidiary of a U.S. multinational corporation, outsourcing actually reduced the strategic influence of HR staff (Patel et al., 2017). Rather than freeing HR for strategic planning and implementation, outsourcing added administrative burdens, illustrating how institutional pressures can lead organizations to adopt

practices that do not deliver promised benefits. Outsourcing HR function in a U.S. public sector organization was found to increase liability when vendors lacked expertise in constitutional, statutory, regulatory, and contract law (Battaglio & Ledvinka, 2009). Our review illustrates the risk that outsourcing decisions may prioritize legitimacy over actual performance. Together, HR outsourcing in the U.S. is influenced by cost efficiency, resource access, and institutional pressures, yet its ability to create genuine strategic value remains contested.

The above findings highlight traditional drivers of HR outsourcing. However, HR outsourcing has grown steadily over the years, due in part to the rising adoption of AI-enabled technologies in HR. AI adoption is accelerating across HR functions, from sourcing, résumé screening, recruitment algorithms to workforce analytics (Rudko et al., 2025; Singh & Pandey, 2024). Emerging evidence suggests that this shift is already affecting the U.S. labor market. Using ADP payroll data, researchers at Stanford University found that younger workers in occupations most exposed to AI automation experienced the greatest decline in employment, compared with peers in roles less affected by AI (Brynjolfsson et al., 2025¹). AI may strengthen the business case for HR outsourcing for smaller organizations while for larger organizations, it creates opportunities to bring HR functions back in-house, as AI tools can be embedded directly into organizational systems and reduce reliance on external providers (Rudko et al., 2025). This points toward a hybrid future: smaller organizations are likely to keep outsourcing transactional HR tasks such as payroll and benefits administration, while larger organizations may increasingly insource strategic HR functions supported by AI.

Organizations should therefore be cautious not to assume that adopting AI will automatically reduce costs; instead, they must weigh whether outsourcing, insourcing, or a hybrid model best aligns with their size, resources, and strategic priorities. Taken together, we have the following recommendations for organizations in Maryland as they consider HR outsourcing in the era of AI adoption:

Balance efficiency with compliance. Outsourcing can reduce administrative costs, but organizations (private and public) in the U.S. in general and Maryland in particular remain accountable for compliance as shown in our review (Hilger, 2004; Battaglio & Ledvinka, 2009). Vendor contracts should include clear responsibilities for legal and regulatory adherence.

¹As a working paper, these findings are preliminary and not yet peer-reviewed, but they provide nascent evidence of how AI adoption is reshaping employment patterns.

Look beyond vendor narratives. Providers often promise efficiency gains, but hidden costs (e.g., monitoring, customization, loss of flexibility) are real (Cappelli & Schwartz, 2024; Johnson et al., 2014). Managers should critically assess total costs, not just headline savings.

Prioritize employee experience. Line managers' satisfaction has been studied (Johnson et al., 2014), but employees are the daily end users of outsourced HR services. Organizations should collect employee feedback to evaluate whether outsourcing truly improves service quality.

Adopt a hybrid approach. Small organizations may continue outsourcing, while larger firms should consider AI-enabled insourcing for strategic HR functions. This dual model balances efficiency with control and innovation. 

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Note: * studies included in the systematic review.



Market Discipline, Trust, and Consumer Protection: Maryland’s Experience with the CFPB Complaint System

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Consumer protection should be at the core of financial regulation and yet is generally an afterthought in a policy environment looking to preserve the health of the overall financial markets. Recent scholarship demonstrates that policies aimed at fostering market discipline and enforcing consumer protection are also integral in building trust in the financial system. Studies show that how complaints are disclosed and resolved reverberates well beyond the financial sector. Public disclosure of financial misconduct in retail banking—operationalized through complaints lodged with the Consumer Financial Protection Bureau (CFPB)—not only disciplines banks but also supports entrepreneurial activities.

For Maryland, a state with high complaint volumes and an active role in defending the CFPB’s authority, these insights carry particular weight. The state has been both a beneficiary of enhanced transparency and a frontline litigant in efforts to preserve the Bureau’s funding.

Market Discipline and Entrepreneurship

Our academic study¹ investigates whether consumer complaint disclosures impose market discipline on local banks and, in turn, encourage new business formation. The logic is straightforward: when misconduct is made public, banks face reputational and regulatory costs. Anticipating these risks, institutions improve their services—reducing fees, resolving disputes more quickly, and building stronger relationships with households and entrepreneurs.

The evidence is compelling. Counties with higher volumes of CFPB complaints, or more complaints per branch, experience significantly greater numbers of new business formations and higher rates of job creation. These effects are not marginal: two-stage least squares tests confirm that the positive coefficients hold even after addressing concerns about endogeneity.

The Role of Trust

Importantly, our study finds that market discipline and social trust are complements. In counties where residents express higher levels of trust in others, the disciplining effect of complaints on entrepreneurial outcomes is magnified. In low-trust areas, residents may file complaints but remain skeptical of future conduct, muting the effect.

In high-trust contexts, by contrast, complaint disclosures reinforce confidence in financial institutions, making entrepreneurs more willing to engage with banks. The existence of the complaints channel put in place by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and administered by the CFPB is deterrent to bad lending behavior and incentivizes productive partnerships.

Complaint to Resolution

The CFPB’s complaint process is designed to give companies the opportunity to provide complete, accurate, and timely responses to their customers. Responsible companies use complaints not only as an opportunity to engage with consumers, but also as an indicator of potential weaknesses in a particular product, service, function, department, or vendor. Companies consider how best to incorporate complaint information into their institutional processes to help ensure that problems are detected early and addressed quickly.

Maryland’s Complaint Landscape

Maryland is a useful lens through which to view these dynamics. The state channels complaints through multiple “front doors”: directly to the CFPB via its online database, and through state agencies such as the Department of Labor’s Office of Financial Regulation² and the Attorney General’s Consumer Protection Division³. This integrated system ensures that Maryland residents, whether they confront issues with credit reporting, mortgage servicing, or deposit accounts, ultimately connect with the federal database.

Patterns in Maryland mirror national trends⁴. In 2024 alone, the CFPB received about 3.2 million complaints concerning 3,600 companies, leading to 2.7 million resolutions. Of these, 83,000 complaints originated from Maryland. This amounts to 1,344 complaints per 100,000 population, the 8th highest rate in the country. Credit reporting dominates the complaint landscape, followed by debt collection and mortgages. Credit reporting complaints relate typically to inaccurate information on a credit report, such as incorrect or unrecognized personal details, loans that appear to be unpaid when they are, or fraudulent accounts. These complaints represent 85% of the national complaints and 87% in Maryland. It is important to note that 86% of consumers had tried to resolve their credit reporting complaints directly with the financial institution before filing their complaint with the CFPB. Once lodged with the

Table 1: Consumer Complaints in Maryland by Complaint Type

Category	2024	2023	2022	2021	2020
Credit Reporting	62,078	25,933	16,616	8,968	5,567
Debt Collection	3,545	1,590	1,401	1,644	1,111
Credit Card	1,931	1,390	1,059	815	767
Bank Account	1,379	1,263	1,032	849	646
Mortgage	835	825	913	1,007	916
Student Loan	449	312	229	123	142
Vehicle Loan	399	366	262	216	174
Money Service	359	317	327	303	240
Consumer Loan	252	68	198	108	96

CFPB, the financial institutions responded to 99.6% of the complaints, a testament of the robustness of the process.

Table 1 provides more detailed information about complaints emanating from Maryland. The explosion in Credit Reporting evident in Maryland follows national trends. In 2024, the CFPB experienced a jump of 182% in Credit Reporting complaints. A particular concerning trend is the rise in complaints related to Bank Accounts. The ability to have access and trust the retail banking sector is essential to economic mobility and to the avoidance of excessively expensive financial services.

Table 2 shows the distribution of complaints across Maryland. Topping the list is Baltimore City with over 3,000 complaints per 100,000 population in 2024, followed by Charles County (2,287) and Prince George’s County (1,814). No other county recorded a rate of complaints exceeding 1,000, with the fewest rate in Garrett County (17). While there is notable variation in complaints rates across the state, we do not see any evidence that the variability is associated with the level of financial distress in the ZIP code from which the complaints originate. This implies that residents from all spectrums of the population of Maryland avail themselves of this resolution avenue. This steady flow of complaint data contributes to a more reliable financial environment for residents and entrepreneurs across the Baltimore–Washington corridor and beyond.

Table 2: Complaints per 100,000 population in Maryland in 2024

County	Complaints per 100,000
Baltimore City	3,104
Charles	2,287
Prince George’s	1,814
Anne Arundel	796
Montgomery	763
Howard	716
Baltimore	637
Washington	580
Frederick	526
Harford	519
Wicomico	515
Cecil	380
Dorchester	375
St. Mary’s	356
Worcester	349
Talbot	312
Somerset	288
Kent	286
Carroll	241
Caroline	234
Calvert	231
Allegany	191
Queen Anne’s	94
Garrett	17

Litigation to Protect the CFPB

Maryland’s reliance on the CFPB’s complaint system also explains its vigorous defense of the Bureau. On February 12, 2025, the City of Baltimore, joined by the Economic Action Maryland Fund, filed a lawsuit⁵ to block efforts by the Trump administration and Acting CFPB Director Russell Vought to defund the agency. The plaintiffs argued that returning reserve funds or cutting operating budgets violated the Administrative Procedure Act and threatened to erode consumer protections.

Although a federal judge denied Baltimore’s request for a preliminary injunction on March 14, 2025, the underlying case continues⁶. The city remains committed to pursuing its claims, with support from advocacy groups like Democracy Forward and a coalition of 23 state attorneys general who filed an amicus brief to bring broader interstate pressure on the actions of the federal government.

Policy Implications

The convergence of academic evidence and state action underscores a central message: complaint transparency is not just about consumer redress. It is also about creating the conditions for local economic dynamism. Curtailing disclosure or weakening the CFPB’s capacity risks undermining not only household protection but also the entrepreneurial base that drives job creation.

Maryland’s case illustrates both sides of the story. On one hand, it benefits from a system where complaint disclosures discipline banks and support business formation. On the other, it has had to fight in court to ensure that system continues to function. The resolution efforts nurtured by the CFPB, which demands complete, accurate, and timely responses by financial institutions, are essential to enforce market discipline in favor of the Maryland consumers.

Conclusion

Our academic study provides empirical confirmation of what Maryland policymakers have intuited: transparency in financial services fosters trust, which in turn fosters growth. As the state defends the CFPB’s funding, it is also defending the entrepreneurial ecosystems that rely on disciplined, trustworthy banks. The stakes, then, extend well beyond the courtroom; they touch the everyday decisions of Maryland residents considering whether to trust a bank, launch a business, or create jobs in their community. 

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Easy Money, Hard Lessons:
A Time for Careful Moves

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Introduction

The Federal Reserve’s most recent Summary of Economic Projections (SEP) offers a glimpse into a possible turning point for U.S. monetary policy. In the September 2025 dot plot¹, most members of the Federal Open Market Committee (FOMC) anticipate two rate cuts before year-end, bringing the federal funds rate (FFR) closer to the 3.5% to 3.75% range by 2026. According to the CME FedWatch, there is a 97.8% chance of a rate cut in October and a 94.9% chance of another in December².

Yet that optimism prompts an important question: Can the Fed ease rates without jeopardizing its progress on inflation? Growth has held up better than many expected, but inflation remains above the 2% target. As Lorie Logan, president and CEO of the Federal Reserve Bank of Dallas, noted recently, it remains prudent to maintain a modestly restrictive stance until the underlying drivers of inflation become clearer Logan (2025). Her point captures the dilemma facing the Fed today: Move too soon, and inflation may reaccelerate; move too late, and the recovery could lose steam.

Inflationary Pressures Persist

Inflation remains elevated and progress toward the Fed’s 2% target has been slower than expected. Because inflation is volatile, policymakers often look to trimmed indicators. Core PCE inflation, which excludes food and energy, registered 2.9% in the 12 months through August. Figure 1a breaks down core inflation by key spending categories: housing, non-housing services, and core goods. The initial surge in goods prices during 2021–2022 proved temporary, but services inflation has been notably stickier. Non-housing services (green bars) now account for a disproportionate share of price pressures, reflecting how labor-intensive sectors continue to drive price pressures. Figure 1b presents one-year inflation expectations from three sources: the New York Fed’s Survey of Consumer Expectations (blue line), the University of Michigan’s consumer survey (red line), and the Cleveland Fed’s model-based forecasts (yellow line). While expectations have declined from 2022 peaks, all remain above the Fed’s 2% target. The Michigan survey, in particular, continues to register elevated concern about future inflation¹. The differences among these measures suggest that consumers and markets view inflation risks through slightly

¹ In January–March 2025, the University of Michigan Surveys of Consumers reported unusually large increases in 1-year and long-run inflation expectations. Respondents frequently cited tariffs and policy changes, and the survey director noted the rise was anticipatory, reflecting concern about future price pressures rather than realized inflation.

Figure 1a: Contributions to Core PCE Inflation

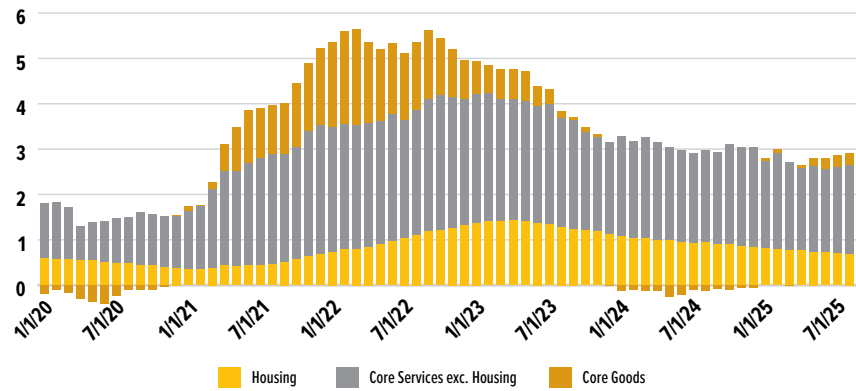
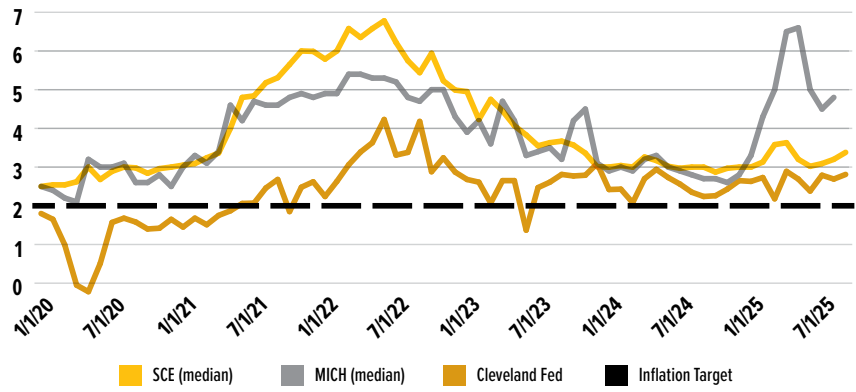


Figure 1b: One-year Expected Inflation

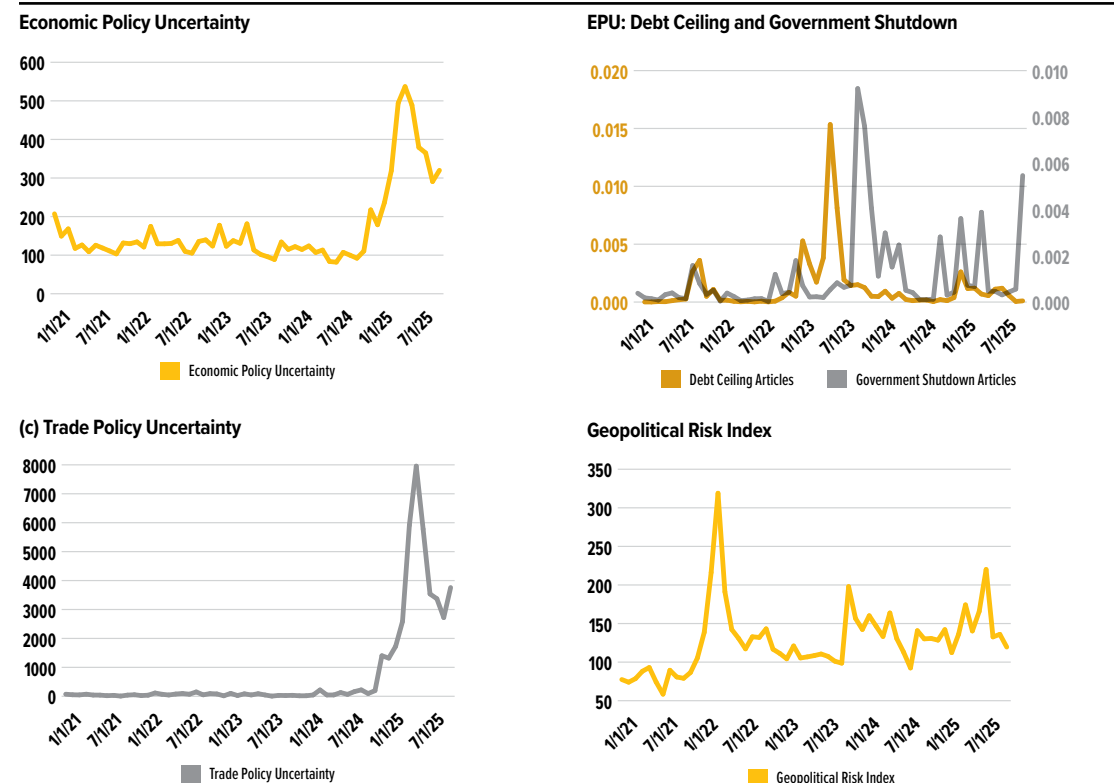


different lenses, but all imply that expectations are not yet fully anchored.

Even small movements in those expectations may have powerful effects. Kiley (2025) finds that a modest unanchoring of inflation expectations can translate into large shifts in the equilibrium policy rate. This dynamic explains why managing expectations remains such a central challenge for the Fed: inflation expectations are not just forecasts. They shape behavior and, ultimately, the macroeconomic outcomes. It is also worth remembering that the overall price level has reset at a higher plateau. Even as inflation slows, households continue to face prices roughly 20% higher than in 2019². Forbes et al. (2025) show that this

² According to data from the U.S. Bureau of Labor Statistics, the Consumer Price Index (CPI) rose cumulatively by 22.8% between December 2019 and August 2025. Over the same period, the U.S. Bureau of Economic Analysis reported a 19.8% cumulative increase in the Personal Consumption Expenditures (PCE) price index.

Figure 2: Policy and Risk Uncertainty Indicators



persistent price-level effect can weigh on purchasing power and influence wage and spending behavior long after inflation abates. In that sense, today's inflation challenge is not only about ongoing price increases but also about how consumers and firms adjust to a permanently higher cost environment.

Logan's recent remarks reflect this complexity. She emphasized the importance of a "learning mindset": "It will take time to observe how the economy is evolving and learn how much room there is for further cuts." Her emphasis on data over rules reflects a shift in how policymakers think about the inflation-employment-output nexus in a post-pandemic economy.

Assessing Economic and Geopolitical Risks

Beyond inflation, a series of global and domestic risks continues to cloud the economic outlook. As shown in Figure 2, four key uncertainty indicators, developed by Baker et al. (2016), remain elevated relative to historical norms, a clear signal that the policy environment remains unsettled and warrants caution in monetary decision-

making. Panel 2a displays the Economic Policy Uncertainty (EPU) index, which has stayed high amid persistent fiscal standoffs, heightened election-year volatility, and ongoing regulatory uncertainty. A large body of research has found that elevated policy uncertainty tends to dampen private-sector activity: firms delay investment, households defer durable purchases, and financial markets turn more risk-averse. While this pullback may temporarily ease demand-side inflation, it also risks underinvestment that can constrain supply and drive up prices over time. Panel 2b focuses more narrowly on fiscal uncertainty by tracking media mentions of "debt ceiling" and "government shutdown". These indicators have surged in 2025, reflecting increasingly contentious debates over federal funding and debt limits. The pronounced spikes in the data mark moments of acute fiscal stress that can spill over into broader macroeconomic sentiment. With federal debt now approaching 120% of GDP, even modest changes in interest rates have larger implications for debt servicing costs. As argued by Schmitt-Grohe and Uribe (2025), persistent fiscal imbalances can complicate inflation control, not only by increasing real economic strain, but also by shifting public expectations about the

government's capacity to manage its obligations. While the Fed maintains independent from fiscal policy, such sustained uncertainty poses indirect challenges to its price stability mandate.

Panel 2c shows a resurgence in Trade Policy Uncertainty, driven by the reimposition of tariffs on

U.S. imports from multiple trading partners in 2025. These types of policy changes may not produce immediate inflation. Instead, the pass-through tends to be lagged, as firms initially absorb costs or delay price adjustments in the hope of policy reversal. But when trade barriers persist, businesses realign supply chains and raise prices, especially in sectors with limited substitution options. In an environment where inflation is already above target, such frictions compound the Fed's challenge. Panel 2d shows geopolitical risk near multi-decade highs. Ongoing conflicts in Ukraine and the Middle East, along with rising U.S.-China tensions, continue to elevate risk. These disruptions have real economic consequences: commodity prices become more volatile, global energy flows are rerouted, and shipping routes face new constraints. The result is inflationary stress through supply channels even as global demand may be weakening.

The overarching risk landscape is asymmetric. While some of these forces may dampen activity, others may stoke inflation. For monetary policymakers, this dual threat makes it harder to rely on simple models or historical analogies. Logan's call for caution and adaptability is rooted in this reality: the economy is being shaped by forces that extend beyond the reach of interest rates.

How Restrictive is the Policy Stance?

As of September 2025, the federal funds rate sits near 4.1%, following the first reduction since late 2024. Determining whether this level is restrictive, neutral, or accommodative is far from straightforward. It depends not only on data but also on how economists interpret the recent inflation cycle and its underlying causes. A simple Taylor Rule comparison gives mixed readings. Figure 3a compares Taylor Rule benchmarks with the actual federal funds rate (FFR). As we can see, versions based on the GDP gap still point to a rate of 5.6%, suggesting policy may be a little loose relative to overall activity. By contrast, unemployment-gap versions suggest a rate around 4.2%, roughly in line with where we are today. That range highlights how uncertain the neutral rate (r^*) remains. As Logan noted, even small misjudgments about r^* can tip policy from slightly restrictive to inadvertently stimulative.

Figure 3a: Taylor Rule Prescriptions and the Actual FFR

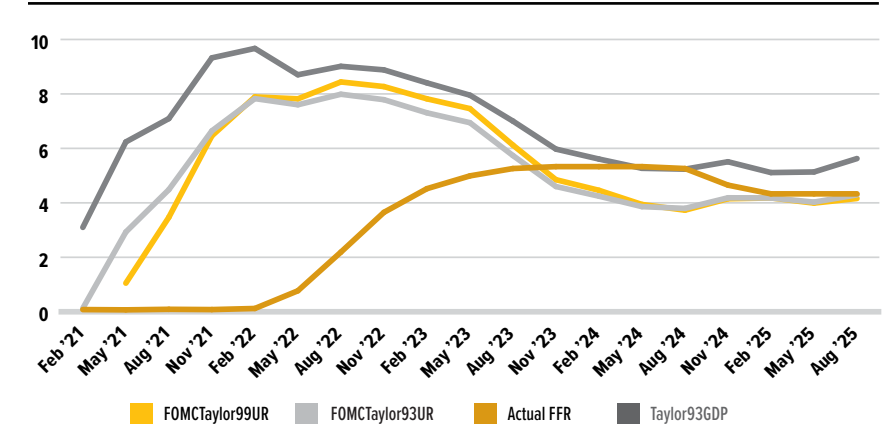
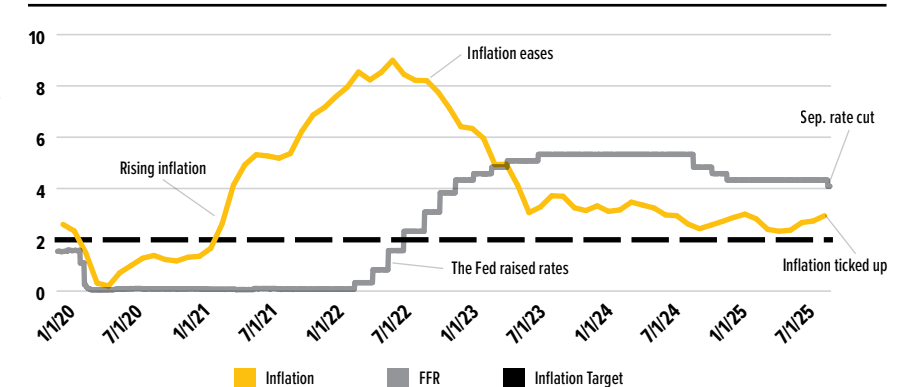


Figure 3b: The Fed's Response and Inflation



Recent history also complicates the traditional view that interest rates alone determine inflation outcomes. Cochrane (2025) reminds us that the inflation burst beginning in 2021 was the largest since the early 1980s, yet it began to ease before the Fed raised rates above inflation or triggered a recession. "Inflation broke out suddenly," he said, "and the Fed did nothing for a full year, leaving interest rates at zero. Yet inflation did not spiral upward." He attributes much of that episode to a fiscal shock, massive pandemic-related deficits that expanded demand without a clear plan for repayment. As those fiscal impulses faded and expectations normalized, inflation began to fall, even before real interest rates turned positive. This view, known as the fiscal theory of the price level, doesn't dismiss the

Fed's role but broadens the lens. It suggests that inflation depends not only on short-term interest rates but also on the credibility of fiscal policy and investors' expectations about government solvency. Figure 3b shows how inflation began to decline even as policy rates remained below rule-based prescriptions. That pattern hints that the disinflation of 2023–2024

may have owed as much to changing fiscal expectations as to monetary tightening itself. At the same time, higher rates have their own fiscal consequences. Each percentage point increase in real rates adds roughly one percent of GDP to federal interest costs. Those linkages blur the old lines between fiscal and monetary policy, making it more difficult to assess in real time how restrictive policy truly is. For now, the best description may be that policy is moderately firm but evolving, consistent with a period when the Fed is reassessing the structure of interest rates, the durability of disinflation, and the boundaries between monetary restraint and fiscal dynamics.

Conclusion

The Federal Reserve's latest projections and market expectations point toward a slow easing cycle, but this moment calls for more than rate setting. Inflation has receded but remains above target. Risks abound, some disinflationary, others inflationary. A premature return to lower rates may risk losing the Fed's hard-won credibility. In a time of overlapping shocks and blurred boundaries between policy domains, steady hands may matter more than strong ones. 

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Research with Impact: How Towson University’s CBE Connects Ideas to Action

By the CBE Development and Research Committee

Each spring, Towson University’s College of Business & Economics (CBE) transforms its classrooms into a forum for discovery, dialogue, and impact. The annual **CBE Development and Research Conference**, held on May 9, 2025, showcased the diversity and depth of faculty and student research that is helping Maryland’s businesses, policymakers, and communities better understand what affects both the bottom line and the people who influence it.

From innovation in higher education and brand authenticity to policy design and predictive analytics, the range of topics showcased CBE’s mission to empower students through transformational learning experiences, create deep connections with business and community partners, and conduct research that drives economic and societal progress in Maryland and beyond.

Innovation and Entrepreneurship in Business and Education

CBE faculty continue to push the boundaries of innovation—both within business practice and higher education. Their research examines how organizations can adapt, how entrepreneurs can bridge the gap between theory and practice, and how learning itself can evolve.

■ **Innovation in Higher Education**

Prof. Jan Baum, Professor, Management

■ **Practical Relevance of Entrepreneurship Research**

Dr. Koushik Dutta, Assistant Professor, Management

■ **Exploring the Antecedents of Employee Innovative Performance: Learning Goal Orientation is Key**

Dr. Tanja R. Darden, Assistant Professor, Management

■ **Can SI Save the Economics Major?**

Dr. Seth Gitter, Professor, Economics, with Dr. Alexa Prettyman, Dr. Melissa Groves, and Prof. Raquel Frye

Marketing, Management, and Human Behavior

Understanding people—how they think, choose, and connect—is central to effective business leadership. CBE marketing and management scholars are uncovering new insights into authenticity, emotion, and motivation that shape consumer and employee behavior alike.



Can focusing on the future help consumers make healthier decisions about food?

In her presentation titled, “Making Choice When Reward Is Unpredictable: The Effect of Uncertainty on Food Consumption Choice” Dr. *Leila*

Khoshghadam, Assistant Professor in the Department of Marketing examined how life events marked by high levels of uncertainty, such as a global pandemic or economic downturn, can trigger significant shifts in individuals’ food consumption choices, leading to unhealthy eating at the expense of long-term goals. Driven by a psychological shift in an individual’s temporal focus, uncertainty can lead people to discount the future and be more likely to seek short-term gratification through unhealthy food choices. Such instances of uncertainty can have lasting physical health effects for individuals if they are not countered with additional dietary education and mental health interventions.

■ **From Disclosure to Authenticity: The Positive Impact of Influencer Sponsorship Transparency on Consumer Perceptions**

Dr. Hua Chang, Associate Professor, Marketing

■ **How, When, and Why Does Brand Name Pronunciation Influence Brand Perceptions?**

Dr. Zhenyu Jin, Assistant Professor, Marketing

■ **Promotions on Product Packaging Across Consumer Goods**

Dr. Brett Kazandjian, Assistant Professor, Marketing

■ **Owner’s Willingness to Accept in the Sharing Economy**

Dr. Eunice Kim, Assistant Professor, Marketing

■ **Emotional Determinants of Authenticity**

Dr. Sasha Pustovit, Assistant Professor, Management

■ **The Impacts of Internal/External CSR on Job Applicants**

Dr. Jianan Li, Assistant Professor, Management

■ **Is Seeing Eye to Eye Possible in Virtual Meetings?**

Dr. Plamen Peev, Professor, Marketing

Finance, Analytics, and Technology

CBE researchers are advancing the use of data analytics and financial modeling to improve decision-making, assess risk, and understand market behavior. Their findings provide insight into how technology and information shape the financial and strategic landscape.

Does the make-up of the board affect how misbehaving CPAs are sanctioned?



In her presentation titled, “The Role of United States Boards of Accountancy in Monitoring and Sanctioning CPA Misbehavior” Dr. Karry Kwon, Assistant Professor in the Department of Accounting investigated how

Boards of Accountancy across the United States take on disciplinary cases. She found that substantial variation in the independence and expertise of board members, the gender and racial diversity of the board, the frequency of board meetings, the board’s licensing and continuing professional education (CPE) requirements, and the board’s budget were shown to affect the types of disciplinary cases they report and the sanctions they impose. These findings indicate the need for additional regulatory guidelines to help the accounting profession better self-regulate and to reduce the risk of inconsistent monitoring of Certified Public Accountants across states.

■ Textual Analysis and Firm Strategy

Dr. Jorge Romero, Professor, Accounting

■ The Effects of Credit Default Swaps (CDS) on Corporate ESG Policy and Performance

Dr. Lijing Du, Professor, Finance

■ How Do Firms Talk the Walk in ESG?

Dr. Jin Park, Professor, Accounting, with Dr. Zhen Zhang

■ The Effect of Real Estate Investment Trusts in the Systemic Risk of Financial Markets

Dr. Xiaolin Li, Professor, Business Analytics & Technology Management

■ Financial Market Discipline and New Business Formation

Dr. Yingying Shao, Professor, Finance

■ Bad Timing Does Not Cost Investors One-Fifth of Their Fund Returns: An Examination of Morningstar’s ‘Mind the Gap’ Study

Dr. Qing Yan, Assistant Professor, Finance

■ Partial vs. Full Technology Adoption: Strategic Implications for Two-Sided Platforms

Dr. Dong-Qing Yao, Professor, Business Analytics & Technology Management

■ The Echoes of Geopolitical Risk and Social Media Sentiment

Dr. Xiaorui Zhu, Assistant Professor, Business Analytics & Technology Management

How machine learning can help reduce human error in economic forecasts

In his presentation, “Forecasting Follies: Machine Learning from Human Errors, Dr. Herbert Zhao, Professor of Economics, demonstrated how advanced machine learning (ML) techniques can be used to mitigate human error and improve benchmark inflation forecasts. Using popular ML techniques such as elastic net, LASSO, and



ridge regressions, Dr. Zhao specifically developed ML-centered adjustment procedures to predict and mitigate human forecast errors like how an AI-powered spell and grammar check works to prevent mistakes in human writing. Such procedures are empirically effective in reducing forecast bias and improving forecast accuracy.

Economics, Policy, and Societal Well-Being

CBE economists continue to illuminate how policy decisions affect individuals, households, and communities—regionally and globally. Their analyses address health, welfare, labor, and social systems that influence both markets and lives.

■ Business Cycles and Public Pensions: Aggregate Risk and Social Security in the United States

Dr. Shantanu Bagchi, Associate Professor, Economics

■ Medicaid Work Requirements, Labor Market Effects, and Welfare

Dr. Juergen Jung, Professor, Economics, & Dr. Vinish Shrestha, Associate Professor, Economics

■ The Effects of ACA-Medicaid Expansion on Infant and Maternal Health Outcomes

Dr. Vinish Shrestha, Associate Professor, Economics

■ Cash Transfers and Mental Health: A Systematic Review and Meta-Analysis

Dr. James Manley, Professor, Economics

■ The Impact of School Entry-Age Requirements on Child Outcomes in Peru

Dr. Chris M. Boyd, Assistant Professor, Economics

■ Fiscal Shocks and Private Employment: Lessons from Three Episodes—Pre-Volcker, Post-Volcker, and the GFC Era

Dr. Shuwei Zhang, Assistant Professor, Economics

How investments in youth can fight homelessness and incarceration rates



In her presentation titled, “Happy 18th Birthday, Now Leave: Estimating the Causal Effects of Extended Foster Care,” Dr. Alexa Prettyman, Assistant Professor in the Department of Economics, found that extended foster care yields a

4:1 return on investment by reducing homelessness among foster youth by 29% and incarceration by 38%. Review of current foster care policies is necessary to determine whether these gains can be increased through further examination of extending foster care benefits.

Student Research Highlights

Student researchers presented projects that demonstrated their growing ability to connect academic theory with applied insight under faculty mentorship. This year, seven students in the Economic Analytics Master’s Program and eight CBE undergraduate students presented original research conducted with a faculty mentor.

Advisor: Dr. Chris Boyd Leon (MS in Economic Analytics)

- *Ozempic’s Outreach: The Role of Medicaid Expansion in Shaping Type 2 Diabetes Treatment* – Brendan Casey*
- *The Auction House Effect: Art Prices in the Market* – Martina Ciriesi*
- *The Effect of Education on Women’s Economic Empowerment in Ghana* – Bernard Gaffa*
- *Scholarships for Students Repeating Principles of Microeconomics* – Alisha Hancock*
- *The Effect of Sports Betting on Collegiate Athletics’ Revenues* – Ana Kenefick*
- *The Impact of IMF Bailouts on Economic Development* – Robyn Matyar*
- *Investigating the Relationship Between Fuel Prices and Public Transit Ridership* – Apoorva Phadnis*

Advisor: Dr. Chris Boyd Leon

- *How Macroeconomic Factors Affect Mutual Funds’ Assets* – Alexander Kauffman

Advisor: Dr. Melissa Groves

- *Discrepancies in Sabermetric Analysis Between College and Professional Baseball* – Colm O’Connor
- *The Impact of Information on Financial Market Shocks* – Andrew Porter
- *Faith and the Glass Ceiling: Religion’s Influence on Women’s Academic and Workplace Advancement* – Gynelle Sackie-Mensah

Advisor: Dr. Tony Milando

- *Inventory Management for Operation Walk* – Dylan Steggerda

Advisor: Dr. Natalie Scala

- *Breaking Barriers to the Ballot: A Study on Voter Access and Trust in Elections* – Sadie Barrett, Alisa Martin, Marie Kouassi
- *Quantitative Risk Assessment of Election Infrastructure Using Attack Trees* – Audrey Knight, Andrew McNeill, Chinwendu Uche

How can a company’s social media communication help monitor its financial performances?

In his poster presentation, Noam Straus, an undergraduate student working with Dr. Xiaorui Zhu and Dr. Stella Tomasi at the Data Analytics Research Lab (DARL), shared findings that more subjective posts on companies’ official X.com accounts are associated with lower trading activities from investors. The results suggest that the sentiment and engagement of a company’s social media activities moderately influence potential investors, highlighting the value of strategically leveraging social media for marketing and risk management purposes.

Connecting Discovery and Application

The Development and Research Conference underscores Towson University CBE’s commitment to research that informs business practice, policy, and community well-being. By fostering collaboration across disciplines and engaging students as emerging scholars, the college continues to strengthen its role as a catalyst for economic and societal impact in Maryland and beyond. 



Towson University Investment Group: Bridging Finance, Research, and Innovation

By Henry Heneghan
*President, Towson University Investment Group
Junior, Majoring in Finance*

As the newest President of the Towson University Investment Group (TUIG), my goal is to expand the organization's scope, strengthen its academic foundation, and reinforce our commitment to developing the next generation of finance professionals. TUIG has long served as a bridge between theory and practice, giving students the opportunity to apply what they learn in the classroom to real-world investment decisions. This year, our focus has centered on innovation, professional growth, and collaboration across our divisions.

Our group operates like a real-world financial organization, with teams that specialize in different sectors of the industry—from wealth management and equity research to mergers and acquisitions. This year, we introduced a new Quantitative Analysis Group to advance our use of data-driven investing. Together, these divisions form the foundation of TUIG's experiential learning model.

Quantitative Analysis Group

"As the new President of TUIG, I wanted to create a space for students to explore the future of finance through data," said Henry Heneghan, President of the Towson University Investment Group. "The Quantitative Analysis Group is designed to help members learn predictive modeling, risk assessment, and algorithmic trading—skills that will prepare them for quant and research roles after graduation."

As the new president of the group, I have decided to launch the newest group, the Quantitative Analysis Group. Our aim is to use predictive modeling to assess risk and exposure of our portfolio's position, as well as the overall market. We also aim to develop a trading strategy based on RSI and VWAP over the next few semesters.

The Quantitative Analysis Group represents TUIG's move toward the growing intersection of finance, coding, and analytics. Its research will support our other divisions, providing data-backed insights for portfolio strategy, sector analysis, and M&A activity.

Professional Development and M&A Focus

"During the current fall semester, we placed additional emphasis on professional development," said Ryan Mutuku, head of the Mergers and Acquisitions Division. "In the absence of our annual gala, our focus has shifted toward equipping members with relevant industry certifications that complement their understanding of corporate finance."

Presently, 8–10 members are preparing for the Securities Industry Essentials (SIE) exam, scheduled for late November through early December. This certification provides a foundational grasp of financial markets, regulatory frameworks, and industry operations knowledge directly applicable to mergers and acquisitions.

"By integrating SIE concepts such as SEC compliance, reporting requirements, trade processes, and customer account management," Ryan explained, "our members are gaining a deeper understanding of how regulatory standards and market mechanics influence deal execution, client relations, and the broader M&A landscape."

This focus on certification reflects TUIG's belief that technical understanding and professional readiness go hand in hand. Members are encouraged to pursue their interests—whether that's corporate dealmaking, valuation, or financial analysis—while developing the credentials that help them stand out in the competitive finance industry.

Wealth Management Division

"The Wealth Management Division gives students the opportunity to see how finance impacts everyday life," said Tare Aghomon, Director of the Wealth Management Division. "Our team works on estate, college, retirement, and tax planning, using real-world case studies to apply what we learn in class to practical financial decisions."

The Wealth Management Division of the Towson University Investment Group focuses on developing students' financial planning skills through practical, real-world application. Each semester, members engage in comprehensive case studies. This semester, we are utilizing a Financial Planning Association (FPA) Case Study to deepen our understanding of comprehensive retirement, tax, and college planning strategies.

"Through this hands-on experience," Tare continued, "students gain valuable insights into the financial planning process and discover potential career paths within the wealth management industry."

The division continues to grow as TUIG's most human-centered program, connecting financial theory to the decisions that shape individual and family wealth.

Equity Research and Portfolio Management

"As Portfolio Manager, I oversee our equity portfolio alongside our Junior Portfolio Manager, Logan Meighan," said Drew Cignatta, head of Equity Research. "We manage a 13-person team that models the TUIG portfolio against the S&P 500 and drives our investment decisions through detailed sector analysis."

Our portfolio is benchmarked against the S&P 500, and right now we are strategically overweight in Financial Services (16.08% vs. 14.70%) and Industrials (11.59% vs. 8.50%), which has been supported by strong performance from companies such as JPMorgan, Berkshire Hathaway, and United Rentals. We have also been intentionally underweight in Technology (13.02% vs. 29.60%) as we continue to monitor elevated market concentration in the sector.

"Each week, I deliver a Market Watch to the group that helps guide these portfolio decisions," Drew said. "Recent themes include the Federal Reserve's developing rate-cut path, geopolitical tensions affecting energy markets, and the influence of mega-cap earnings such as Nvidia's latest valuation milestone."

Looking ahead, the equity and quant teams will continue working together to strengthen the group's research process—combining technical analysis with fundamentals to build a portfolio designed for long-term, risk-adjusted outperformance.

Looking Ahead

TUIG continues to evolve as a professional learning organization dedicated to excellence, collaboration, and innovation. The integration of quantitative research, wealth management, and M&A education reflects a unified goal—to build well-rounded analysts who can think critically about markets and strategy.

Over the next year, the Quantitative Analysis Group will work alongside the Portfolio Management team to incorporate data modeling into sector analysis. The Wealth Management Division will expand its work with the FPA to simulate advanced client cases, while our professional development initiatives will grow to include certifications such as Bloomberg Market Concepts (BMC) and the Certified Financial Planner (CFP) pathway.

"My vision for TUIG is to make it a place where ambition meets application," said Henry Heneghan. "We're creating a program that gives students not just knowledge, but experience—the kind of experience that builds real confidence before they even step into the industry."

Towson University Investment Group Disclosure:

TUIG is a student run organization that was created as a forum for highly driven, like-minded students to gain real-world experience through quantitative and qualitative research. We offer students a professional environment to discuss, learn, and connect with real-world financial experiences. TUIG maintains professional relationships with a widespread network of integrated local Maryland businesses in order to provide members with the opportunity to create interpersonal relationships with mentors and potential future employers. 

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Undergraduate Led Health Research in Low- and Middle-Income Countries

Chris Boyd, Ph.D.,
Assistant Professor in Economics

Seth Gitter, Ph.D.,
Professor in Economics

Evelyn Lee '26
Major in Mathematics, Actuarial Science & Risk Management

Monica Mitchell
Undergraduate student, Senior, Major in International Studies

Emanuel Garcia Servellon, '26
Undergraduate student, Major in Economics

In the summer of 2025, Towson University's College of Business and Economics (CBE) funded 10 students to work with four faculty members on various undergraduate research projects. This article describes three of those students whose work focused on middle- and lower-income countries, including Peru, Brazil and Ghana. As part of their research, the students conducted data analyses to better understand how health can be influenced by food prices, cash transfer programs and increasing health insurance. CBE students have been studying ways to improve the lives of people in low-income countries and the US over the last decade as part of summer undergraduate research efforts. These students have gone on to successful careers in business (J.P. Morgan and T. Rowe Price) and government (the Federal Reserve Board of Governors, the Bureau of Labor Statistics, and the Department of Health and Human Services). Below, each student describes their project.

The impact of food inflation on mental health in Peru

Mentor Dr. Chris Boyd Leon and undergraduate student Emanuel Garcia Servellon from Towson University researched food prices and investigated their effects on the mental health of women in Peru. Food prices and inflation have been a major topic of discussion in many countries around the world. Garcia Servellon's research showed that food prices are a major cause of stress and can even create symptoms of anxiety and depression (especially in under-developed countries). They analyzed food price data from the Peruvian government and women's mental health data from the Demographic and Health Surveys (DHS) from Peru, for the years 2007-2021. The analysis focused on the prices of the most commonly consumed foods in the basic food basket, such as white rice, papaya, noodles, and oranges, along with other staples. After carefully combining the food prices for each survey respondent's reference period, the analysis showed that for every increase in food prices of one Sol (about USD 0.25), the PHQ-9 score increased by 0.5 on a 0 – 27-point scale. PHQ-9 is a self-report questionnaire that helps determine how strong one's depression is. According to the statistical analysis, food prices had a significant effect on mental health. These results suggest that food prices are important beyond their impact on food availability: food prices are an important factor affecting women's mental health in their day-to-day lives. Moreover, these results indicate that taking care of food inflation is important beyond people's budget constraints and incomes, as it can also affect mood and motivation.

Comparing Brazilian Cash Transfer Research in Portuguese and English

Mentor Seth Gitter worked with Monica Mitchell who completed a summer research project that analyzed the relationship between studies on Brazil's Bolsa Familia conditional cash transfer program in Portuguese and English. The program gives money to mothers in Brazil on the condition that their children get regular health checkups and attend school, currently 20% of Brazilians receive funds from the program. Mitchell conducted an extensive literature search in Portuguese of Bolsa Familia's influence on nutrition and compared it to one that had already been done in English. Based on this search Mitchell examined authors' affiliations, methods, sample sizes, citation counts, and anthropometrics findings to assess how language impacts the evidence used to evaluate nutritional outcomes for children. This experience enhanced her skills in conducting literature reviews, creating datasets in Excel, writing skills, and presenting findings across languages. Mitchell is preparing to present the project at Towson's summer research conference. This research project experience deepened her interest in International Development in Economics, where Mitchell aims to continue applying data to comprehend how social program interventions can support families worldwide.

Health Insurance Expansion and Use of Health Services in Ghana

Mentor Dr. Seth Gitter worked with Evelyn Lee on a project looking at health care in Ghana. Before the 2000s, Ghana did not have any structured health insurance coverage besides small communal health care schemes; thus, there was no protection for a variety of families when a medical situation occurred. Then, Ghana started to improve and fund their National Health Insurance Scheme (NHIS) while increasing its accessibility. For example, in July 2008, all pregnant women and their children were eligible to enroll in Ghana's NHIS. Lee's current research examines how the increase in health insurance coverage potentially influenced immunization and infant mortality. Specifically, the study used data on over 2,000 children under the age of 1 within Demographic and Health Surveys from 2003, 2008, and 2022. Lee is still in the process of analyzing the data, but has found an increase in health insurance coverage in children born between July and December 2008 compared to children born between January and June 2008. 

Making Cents of AI?

By Niall H O'Malley, MBA

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Editor for this article: Hai Pham.

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What is Artificial Intelligence?

Artificial intelligence (AI) is such a broad term that it creates confusion. Unlike the AI boom of the late 1980s that used “If Then” programming, the new AI models represent a step change in analytical capability. A key change from a user perspective is that users can make written or verbal natural language requests. The AI models are trained on massive amounts of data and use matrix math to calculate complex probability distributions to understand data relationships and assign weights.

So, where does AI begin and where does it end? The easiest way to answer where AI begins is to look at the inputs, the huge amounts of data, which are mined for mathematical relationships, which are then used to calculate complex probabilities. The calculator engines for this work are semi-conductors, and new advances in semiconductor design and processing make the complex simultaneous calculations on which AI relies possible. Since AI models are trained on data, the quality of the data used to create the AI model is important.

Garbage In Equals Garbage Out

The internet has lots of useful information, but it is also filled with an amazing amount of garbage and unhinged commentary. Companies like Meta have perfected the art of creating echo chambers that provide the users with content verification dopamine. The content often blurs the line between truth and fiction using selective facts. An issue for AI models is training data that has false relationships, which in turn enables AI models to experience hallucinations, resulting in false information being presented as fact. The age-old issue of garbage in equaling garbage out creates an important limitation impacting the usefulness of AI models.

Cleaning Data

For AI models to be more effective and avoid hallucinations, a new professional expertise, referred to as data governance, is coming into its own. Data governance for AI models is focused on standardizing data, removing duplicate data, and searching for the source of errors and removing erroneous information. The cleaned data reduces computing time and improves the accuracy of the AI models while reducing the frequency of AI model hallucinations. Data governance is a rapidly expanding field, since review and verification are critical for increasing the usefulness of AI models. Information technology companies are starting to tie performance bonuses to data cleanliness. Data governance specialists are also systematizing the process for gathering of new input data to ensure data cleanliness.

Confusing AI term – Tokenization

A key item to understand is that computers do not process text, they only process numbers. Each alphabetic character or part of a word is assigned a unique numeric identification. The process associated with converting language into numeric data that can then be processed by a computer is called “tokenization”. Tokenization rules were developed in the 1960s to enable computers to process words. Grammar correction requires tokenized data since computers can only process numeric data. In the 1990s, language models were developed, but it was not until 2017 when a new methodology for processing data was developed, which assigns weights of importance while processing all relevant data simultaneously.

What are the limits of AI?

The goal of the massive capital expenditures by AI model developers is Artificial General Intelligence (AGI), where an AI model matches or exceeds human cognitive capabilities across virtually any intellectual task. In many respects it is an arms race. Who can build the next 10x in computing power? The speed of the development is alarming since there are security vulnerabilities in AI programs being rushed to market and there is very little regulatory structure. A current rush item is creating AI agents that carry out tasks on the behalf of users (e.g. booking travel). While many uses offer real benefits, bad actors are also actively using AI programs to exploit security vulnerabilities and create a new level of AI enabled criminal activity.

Will AI Models Run Out of Data?

A new trend in AI model development is using synthetic data, or data that imitates real-world data but is not collected from actual events or people. A specific goal of using synthetic data is to train the AI model weights assigned to data. As the data sets grow, there is a natural convergence in responses provided by the AI models. A question arises, how many AI models with similar sounding answers are needed? Will competition for customers lead to higher customer acquisition costs? Another potential industry change is the commercialization of quantum computers, which have the potential to process data at dramatically faster speeds than traditional AI computers.

Impacting White Collar Jobs

University students who recently graduated are finding it harder to get a job as AI impacts the number of white-collar entry-level jobs and internships. Mid-level and senior jobs have not been impacted significantly, but what happens if

consulting, advertising, law and financial jobs are broadly reduced? When does AI become a political factor as the divide between the haves and the have-nots grow? These are challenging questions that could impact job growth and retirement contributions, which in turn could impact financial markets.

AI Chip Supply-Chain Dependencies

AI development is increasingly becoming a national effort. China is committed to national AI development, which has economic and military implications. Nation states could disable IT systems with an army of AI hacking agents. China’s military through its Joint Sword series of exercises is advancing its capabilities to blockade Taiwan. What happens if access to AI chips is cut off? Taiwan produces over 90% of the world’s high end AI chips. Just like rare earth materials, the U.S. has a critical dependency on AI chips. Through a combination of stick and carrot trade actions, the Trump Administration has been aggressively using tariffs and tariff exemptions to force companies to expand their U.S. investment in U.S. AI chip production.

Unproductive AI Slop

AI models have mastered the art of generating smart-sounding content that really says nothing. Users are dropping emails in AI models. The AI model-generated multi-paragraph response often fails to say anything substantive. Some of the AI slop is experimentation. Two of the frequent user answers in AI use studies indicate that laziness or a lack of confidence are key AI use drivers. Productivity enhancements require critical review of edit suggestions. Another interesting trend is that OpenAI’s ChatGPT is increasingly being used as a decision therapist.

Blue Book Examination Books

When ChatGPT was released in November 2022, one of the most engaged user groups was students. During each of the past three summers when schools are not in session, ChatGPT user growth has fallen during June, July, and August as student engagement of the AI model has fallen. Teachers at the high school and university level seek to teach critical reasoning, which is a key life skill. A particularly challenging issue for students is that they do not have the benefit of subject matter expertise, so it is harder for them to know when an AI model is producing false information and hallucinating. Teachers are assigning more in class assignments and writing exercises where AI models cannot be used, so teachers can more accurately assess student mastery of the subject material. Tests are increasingly shifting back to the Blue Book Examination Books. Covid

almost put the Pennsylvania based maker of Blue Books out of business, but now the biggest challenge for the company is responding to a surge in orders.

Maryland’s AI Disadvantages

Maryland has a 6% digital tax, which discourages companies from locating information technology assets in Maryland. Simultaneously, Maryland has been importing 40% of its electricity, which has led to steep electricity rate increases as demand grows. This puts Maryland at a disadvantage, when trying to attract energy intensive data centers. During 2025, the cost of capacity power in Maryland increased 698%. Maryland needs to increase baseload power production, while switching to cleaner natural gas. In 2020 Maryland passed a tax exemption for data centers, but only one hyperscale datacenter in Frederick is nearing completion. Another challenge for Maryland is the PJM Connector, which is planned to cut through beautiful farm country, solely to provide power to datacenters in Virginia.

Corporate Data Mining

Corporations are realizing the value of their data and are increasingly committed to developing proprietary AI models and establishing controls that limit and/or prohibit data sharing with other AI models. Large and mid-sized companies and organizations are increasingly trying to find ways to develop proprietary AI models that give them a competitive advantage. How can more be done with less? Ultimately, this will result in AI models scaling the corporate ladder.

Unprecedented Commitments

OpenAI has made over \$1.5 trillion in contract commitments during 2025 but lost over (\$5 billion) last year. In June, OpenAI announced \$10 billion in recurring revenue, while at the same time announcing a continued commitment to unprofitable operations. In September, OpenAI reported 700 million users with just 5% of users paying for ChatGPT. Users in emerging markets exceed U.S. users, but how does OpenAI monetize users with less disposable income? Nvidia’s promise to invest \$100 billion in OpenAI so it can buy Nvidia chips raises circular financing red flags. The power needs of data centers are stressing U.S. power generation capacity, electricity grids and local water supplies. Without building more power generation capacity, AI computation rationing and blackouts are growing threats. Up to 40% of data center energy consumption can be for cooling. Amazingly, the Stargate Abaline, Texas data center under construction will use more than 50 times the number of chillers than New York City’s Empire State building.

Table 1. The AI Ecosystem

Category	Leading Companies / Models
Top AI Models / Search Engines	ChatGPT (OpenAI), Copilot (Microsoft), Gemini (Google), Perplexity AI, Claude (Anthropic), Grok (xAI), R1 (DeepSeek), Qwen (Alibaba)
Top AI Chip Design Software Companies	Cadence, Synopsys
Top AI Chip Designers (Fabless – No Manufacturing Facilities)	Nvidia, Broadcom, Qualcomm (building fab)
Top AI Chip Manufacturers	Taiwan Semiconductor Manufacturing Company (TSMC), AMD, Huawei, Intel, Arm Holdings
Top Lithography and Chip Production Equipment Producers	ASML, Applied Materials, Lam Research, KLA, Tokyo Electron
Top AI Memory Producers	Micron, SK Hynix, Samsung
Top Cloud Providers	Amazon Web Services, Microsoft Azure, Google Cloud Platform, Oracle Cloud, Alibaba Cloud, IBM Cloud (Kyndryl)
Top AI Data Processors	Snowflake, Databricks
Top Cloud Security Providers	Palo Alto Networks, CrowdStrike, Cloudflare, Netskope, Zscaler, SentinelOne, Check Point

Closing Thoughts

There is still a need for humans in the loop that actually create documents and use critical reasoning to establish fact from AI model fiction. Asking for “all sources in quotations” helps the user avoid quoting false sources. Data fencing and a lack of profitability will challenge ChatGPT’s business model. OpenAI reported in September that approximately 70% of ChatGPT’s use is non-work. Further, having 81% of ChatGPT’s users outside the U.S. is an additional factor making monetizing users difficult. To break even on Open AI’s \$1.5 trillion worth of commitments associated with ChatGPT there would need to be 1.3 billion users paying \$95 a month, which is a far cry from the 40 million users paying \$20 a month in October.

The potential for AI models in an array of industries including helping design new aerospace structures, analyzing proteins for new drug discovery, and red lining legal documents are promising. Corporate customers are prepared to pay for and invest in AI models that can offer proprietary productivity gains. The current AI land grab is dramatically pushing up the breakeven cost of AI models, which increases the potential for losses on AI investments. The biggest geopolitical threat to AI is the loss of Taiwan’s independence, which produces over 90% of the AI chips. Over investing is part of the human experience whether AI models are included or not. Historic data does not make a user rational, but if used to pressure test ideas it can be helpful to have a research assistant. With over 10% of the world’s population using AI models, it is important to understand how AI models are shaping the world we live in and offering a new extension for strategic thinking. 

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Bridging the Career Readiness Gap:
How Towson University’s College of
Business and Economics Prepares
Students for the Future of Work

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Over the past two decades, educators and industry leaders have documented a persistent “career readiness gap,” prompting widespread calls to redesign how colleges prepare students for professional success (Abraham, 2006; Bellizzi, 2008; Sigmar et al., 2012; Kastberg, 2020). Amid rapid advances in artificial intelligence (AI) and workplace technology, employers reaffirm that foundational skills—especially communication, problem solving, and collaboration—remain the defining differentiators for entry-level success (Brunner & Khaikin, 2025; Perkins, 2025; Ellingrud, 2024; Hosseinioun et al., 2025). These core capabilities are further elevated when employees bring emotional intelligence (EI) skills, such as Impulse Control, Empathy, and Emotional Self-Awareness, to the table.

TU Student Testimonial (2025)

BUSX-301 [Business Communications] has been an eye-opening experience to the true nature and demand of the professional world. Through networking opportunities, written and verbal assignments, and self-assessments, I have significantly improved my professionalism and business presence, preparing me for future career opportunities. I have gained a level of confidence I did not believe was achievable.

For more than 25 years, Towson University’s (TU’s) College of Business and Economics (CBE) has taken an evidence-based approach to bridge this readiness gap. Through its Business Excellence Program (BUSX), students learn that effective communication, career advancement, and personal fulfillment are all tied to EI, self-management, and the ability to build authentic, collaborative, and mutually rewarding relationships. The program’s design aligns with employer expectations and advances CBE’s mission to graduate empathetic, adaptable, and career-ready professionals.

The Challenge: A Widening
Career Readiness Gap

In what has become the most competitive entry-level job market in five years, many college students remain unaware of their career-readiness shortcomings (Cengage Group, 2025; Nietzel, 2025; Gray, 2025). Industry reports show that graduates frequently overestimate their professional skills and competencies, which contributes to difficulty securing desired employment after gradu-

Table 1. Student and Employer Ratings of Student Proficiency in Career Readiness Competencies

Competency	New Graduates		Employers	
	Importance	Proficiency	Importance	Proficiency
Communication	96.3%	78.1%	96.1%	53.5%
Critical Thinking	94.0%	80.8%	96.1%	55.9%
Teamwork	90.5%	83.5%	93.9%	81.5%
Career & Self-Development	87.8%	61.5%	65.6%	43.2%
Professionalism	88.9%	79.7%	89.4%	50.3%
Leadership	84.6%	66.0%	45.0%	31.0%
Technology	77.9%	60.5%	71.7%	72.0%
Equity & Inclusion	78.3%	79.5%	70.0%	63.3%

(Gray, 2025). Adapted with permission

ation (Cengage Group, 2025; Gray, 2025). While higher education continues to equip students with valuable technical expertise, many lack the social and emotional skills necessary to become well-rounded, adaptable, and employable professionals. According to the *Cengage 2025 Graduate Employability Report*, only 30% of new graduates obtained full-time positions related to their field of study—down from 41% the previous year. This tightening labor market is further compounded by a widening gap between employer expectations and graduates’ self-assessments of career readiness. As illustrated in Table 1, surveys conducted by the National Association of Colleges and Employers (NACE) reveal that while nearly 80% of students rate themselves highly in communication and professionalism, only about half of employers share that view (Gray, 2025).

Similarly, Multi-Health Systems (MHS), a lead innovator of personal development assessments, found that Generation Z (1997–2012) scores significantly lower than other generations in three EI skills: Independence, Problem Solving, and Stress Tolerance (Shaw, 2025). This EI gap, shown in Figure 1, could impact this generation’s professional relationships, performance, agility, and fulfillment (Brunner & Khaikin, 2025; McDonald & Solomon, 2025).

Research Confirms the Value of
Social-Emotional Competencies

Recent research reinforces these trends, underscoring that as technology evolves, foundational skills remain the strongest predictors of long-term success (Brunner & Khaikin, 2025; Ellingrud, 2025; Perkins, 2025; Nietzel, 2025; Hosseinioun et al., 2025). For example, a longitudinal study from 2005 to 2019, which analyzed more than 1,000 occupations and 70 million job transitions, found that

Figure 1. Comparing EQ-i 2.0 Assessment Scores Across Generations

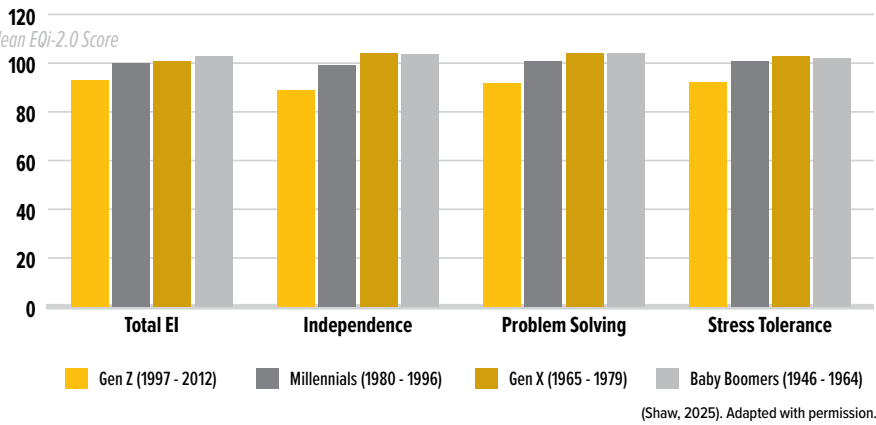
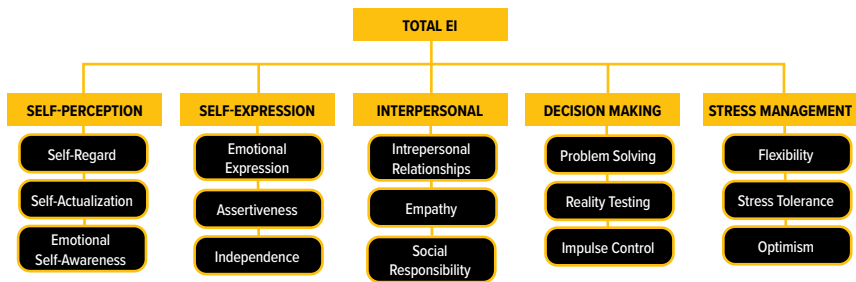


Figure 2. Factor Structure of the EQ-i 2.0 Model



Adapted with permission from EQ-i 2.0 Manual by MHS, https://cdn.mhs.com/mhsdocs/EQI20Manual/print/part1/p_eqiModel.html. Copyright 2011 by MHS.

professionals who developed foundational competencies rather than narrow technical expertise advanced farther faster, earned higher wages, and demonstrated greater resilience during market shifts (Hosseinioun et al., 2025).

Hosseinioun et al. (2025) also concluded that long-term success hinges on social and interpersonal strengths: “The glue that keeps talent productive is social skill—communication, empathy, conflict resolution, and the ability to coordinate diverse expertise.” Their findings spotlight a clear mandate for universities: to weave social-emotional learning into the fabric of career preparation so graduates can lead and collaborate effectively in evolving workplaces.

Innovative Additions: Emotional Intelligence & Experiential Learning

Recognizing EI as a cornerstone of career readiness, TU’s BUSX faculty integrated the MHS EQ-i® 2.0 Higher Education assessment into the program’s curriculum in the Fall of 2024. As Figure 2 captures, the EQ-i® 2.0 model evaluates five core EI composites and 15 specific subskills. The resulting *Higher Education Report* provides students with a validated benchmark that compares their results to a North American norm group of undergraduates, helping them translate self-awareness into measurable personal and professional growth.

Through reflection exercises, case studies, and real-world scenarios, students apply EI concepts situationally—experimenting with new behaviors, evaluating

TU Student Testimonial (2025)

I’ve found that having a calm, composed demeanor is crucial when interacting with clients or colleagues, particularly in high-pressure situations. Whether dealing with difficult financial markets or managing tight deadlines, maintaining emotional balance allows me to make more measured, thoughtful decisions.

outcomes, and refining their professional presence. Regular touchpoints sustain this engagement, prompting students to incorporate multiple EI skills in tandem while strengthening adaptability, situational awareness, and accountability. This iterative approach begins in the Business Communications course and continues in Professional Experience, providing the time, structure, and reflective practice necessary to cultivate EI and professional maturity (Opyt, 2019; Kastberg et al., 2020). Collectively, the BUSX sequence bridges classroom learning with professional performance—making EI a lived and measurable framework for growth.

Practice, Practice, Practice: Learning by Doing

To reinforce EI learning, the BUSX team designed experiential opportunities where students apply these skills in real time. One of the program’s signature initiatives is the Mock Interview Event, which brings together nearly 350 students each semester with more than 70 alumni and local employers for behavioral interviews. These sessions

yield authentic practice and structured feedback, allowing students to refine their professional presence under realistic conditions. The event fosters intergenerational and interprofessional communication and networking, enabling students to better understand workforce expectations while giving employers and instructors deeper insight into the strengths, needs, and potential of emerging talent.

Results: Student Growth and Employer Value

Early results are compelling. Students report greater composure under pressure, stronger networking skills, and increased confidence in professional settings. For employers, the payoff is clear: TU graduates are better prepared to contribute to hybrid, AI-driven, and multi-generational workplaces.

Connecting Student Growth to the Data

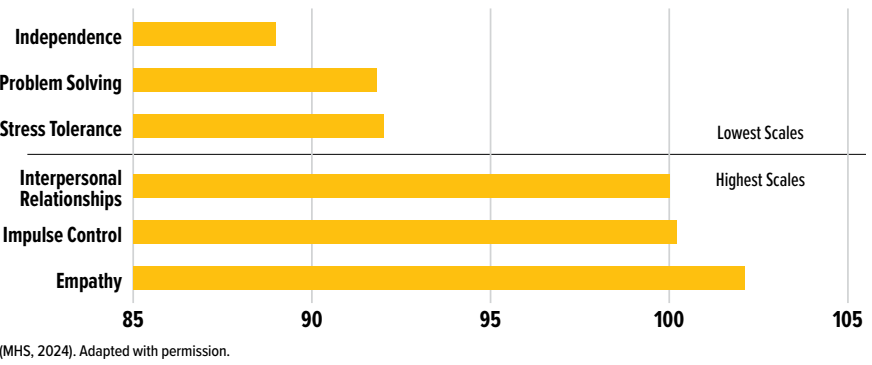
Research indicates that EI skills are developmental and can be learned through structured experiences such as peer and multigenerational interactions, role-playing, constructive feedback, journaling, and EI assessments (Kastberg et al., 2020; Opyt, 2019; Hosseinioun et al.,

TU Student Testimonial (2025)

Developing EI has taught me to approach interviews and networking events with confidence and composure, even under pressure. By incorporating stress management techniques, such as controlled breathing, I ensure I can focus on presenting myself as capable and poised, strengthening my professional presence.

2025; Shaw, 2025). This growing body of literature supports the BUSX curricula’s potential to help students enhance both their EI strengths and areas for growth. As shown in Figure 3, Gen Z tends to excel in empathy, impulse control, and interpersonal relationships, while scoring lower in independence, problem solving, and stress tolerance (MHS, n.d.). By embedding validated tools like the EQ-i 2.0® and integrating them into reflective, experiential learning environments, BUSX enables TU students to grow their interpersonal strengths while also bridging the career-readiness gap.

Figure 3. Generation Z’s Highest & Lowest EI Skills



Why This Matters for Maryland and Beyond

The stakes go beyond individual student outcomes. By weaving EI and career preparation into the BUSX curriculum, TU strengthens Maryland’s talent pipeline. Local businesses gain graduates who can handle feedback, manage stress, and adapt to changing conditions—qualities that employers increasingly prioritize.

Looking Ahead

Towson University’s BUSX team is committed to continuous innovation. Future plans include:

- Expanding faculty engagement with EI assessments.
- Deepening employer partnerships through internship evaluations.
- Conducting longitudinal research to track graduates’ long-term outcomes.
- Sharing results regionally and nationally to advance the conversation on career readiness.

AS FAR AS **OPPORTUNITY** IS CONCERNED, **TIGERS**
TAKE THE LEAD

A Call to Reflection

The career readiness gap cannot be solved with technical training alone. As AI reshapes work, what remains uniquely human—empathy, judgment, adaptability—becomes the true differentiator. TU’s model demonstrates how EI and experiential learning can transform undergraduates into professionals ready to thrive.

“If your own team took an emotional intelligence assessment today, what would it reveal—and how might it transform your workplace tomorrow?” 

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MARYLAND’S #1 PUBLIC UNIVERSITY

Source: Wall Street Journal, 2026 College Rankings

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ABOUT TOWSON UNIVERSITY

Towson University is Maryland's university of opportunities. With more than 150 years of experience pushing possibilities, TU is recognized as one of America's top regional public universities and a leader in academic excellence, research and discovery. As the largest university in Greater Baltimore and Maryland's fastest-growing university, Towson University's momentum is always accelerating with more than 19,500 current students and more than 200 bachelor's, master's and doctoral degree programs in the liberal arts and sciences and applied professional fields. Located amid one of the East Coast's cultural and economic epicenters, TU is a beacon and powerful catalyst in the Mid-Atlantic region partnering with hundreds of businesses and organizations, impacting communities and fueling change. Towson University is currently ranked as a leading regional university by both Princeton Review and U.S. News & World Report. TU is also one of only a handful of institutions where graduation and retention rates are the same for all students, a result of a deeply inclusive culture with a focus on equity among all students, faculty and staff.





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