



# Individual Coursework Submission Form

## Specialist Masters Programme

<b>Surname: Dash</b>	<b>First Name: Debasmita</b>
<b>MSc in: Business Analytics</b>	<b>Student ID number: 240056225</b>
<b>Module Code: SMM635</b>	
<b>Module Title: Data Visualisation</b>	
<b>Lecturer: Simone Santoni</b>	<b>Submission Date: 4th December 2024</b>
<p><b>Declaration:</b></p> <p>By submitting this work, I declare that this work is entirely my own except those parts duly identified and referenced in my submission. It complies with any specified word limits and the requirements and regulations detailed in the coursework instructions and any other relevant programme and module documentation. In submitting this work, I acknowledge that I have read and understood the regulations and code regarding academic misconduct, including that relating to plagiarism, as specified in the Programme Handbook. I also acknowledge that this work will be subject to a variety of checks for academic misconduct.</p> <p>We acknowledge that work submitted late without a granted extension will be subject to penalties, as outlined in the Programme Handbook. Penalties will be applied for a maximum of five days lateness, after which a mark of zero will be awarded.</p>	
<b>Marker's Comments (if not being marked on-line):</b>	

**Deduction for Late Submission:**

**Final Mark:**

 %

# 1. Introduction

## 1.1 Background of the Platform Economy & Business Problem

In 2016, Uber and Lyft ceased operations in Austin following a local ordinance requiring fingerprint-based background checks for drivers. This regulatory change triggered a 12-month gap in ride-sharing services until statewide regulations allowed their return in 2017. The absence of these platforms disrupted mobility, potentially impacting local businesses like restaurants.

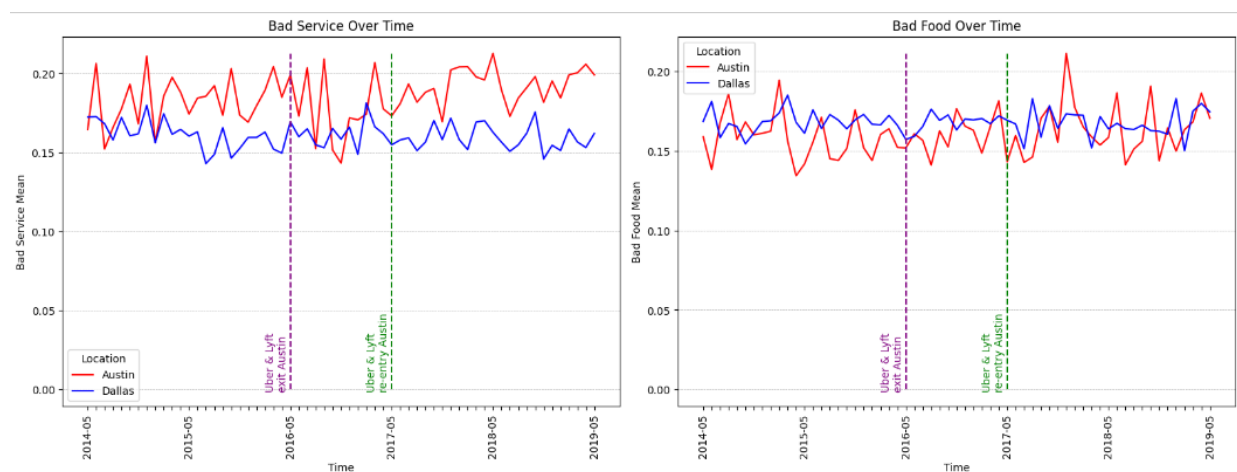
## 1.2 Market Disruptions from Uber & Lyft's Exit

- Uber and Lyft's exit disrupted worker commutes, making travel difficult, costly, and time-consuming, particularly for late shifts or areas lacking public transport.
- Reduced customer access due to the absence of convenient ride-sharing also led to fewer tips and lower earning potential for staff.
- This dual impact affected both employee retention and restaurant operations.

## 2. Key Insights and Analysis

### 2.1 Does the exit of Uber and Lyft from Austin, Texas, affect the quality of service and food in local restaurants?

#### 2.1.1 Plot 1: Impact of Uber and Lyft's Exit on Service and Food Quality Over Time

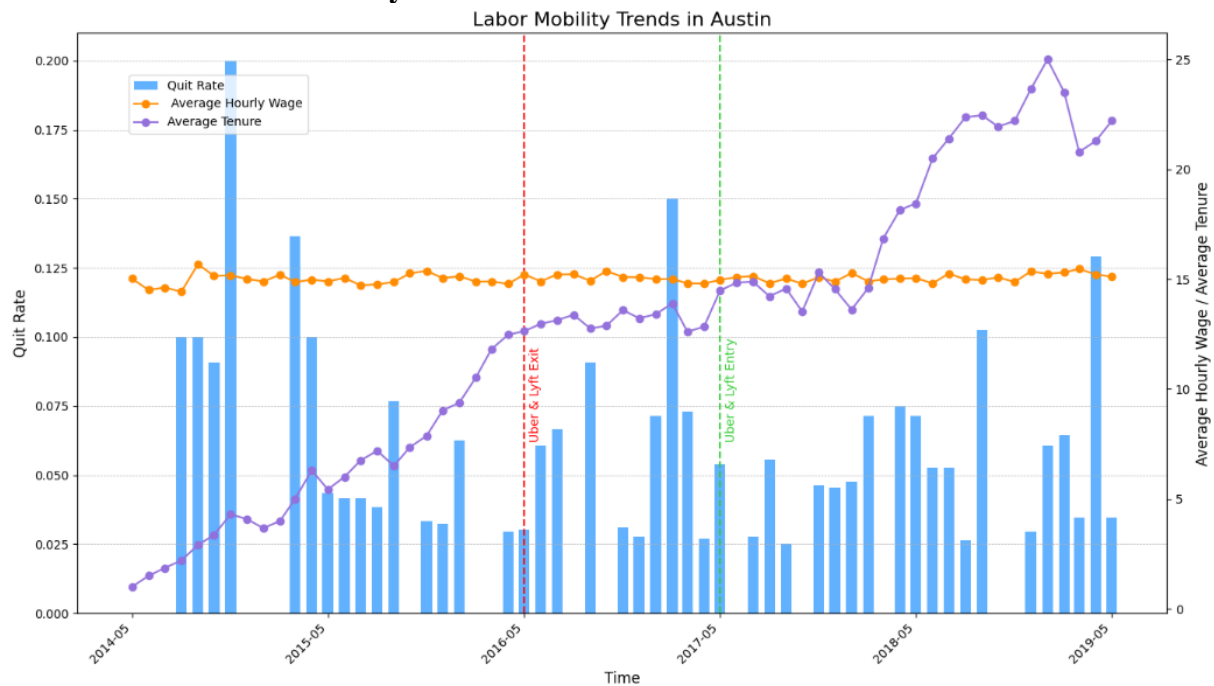


Plot (i): Impact of Uber and Lyft's Exit on Service and Food Quality Over Time in Austin & Dallas

- **Insights:**
  - **Service quality** in Austin declined during the exit of Uber and Lyft, with increasing negative reviews for service compared to Dallas, which experienced minimal disruption.
  - **Food quality** in Austin although impacted, indicating a less pronounced impact compared to Service.
- **Analysis:**
  - Yes, quality of service and food in local restaurants was affected by the exit of Uber & Lyft. The **“bad service” trend (Plot I)** saw its most pronounced spikes, indicating that understaffed tipped front-of-house roles and also struggled to meet customer expectations.
  - The **“bad food” trend (Plot i)**, while also affected, displayed a more moderate increase. This suggests that kitchen operations were less sensitive, though still affected. Additionally, disruptions in management may have strained quality control processes, compounding the overall problem.

## 2.2 Mechanisms Affecting the Quality of Service and Food in Local Restaurants

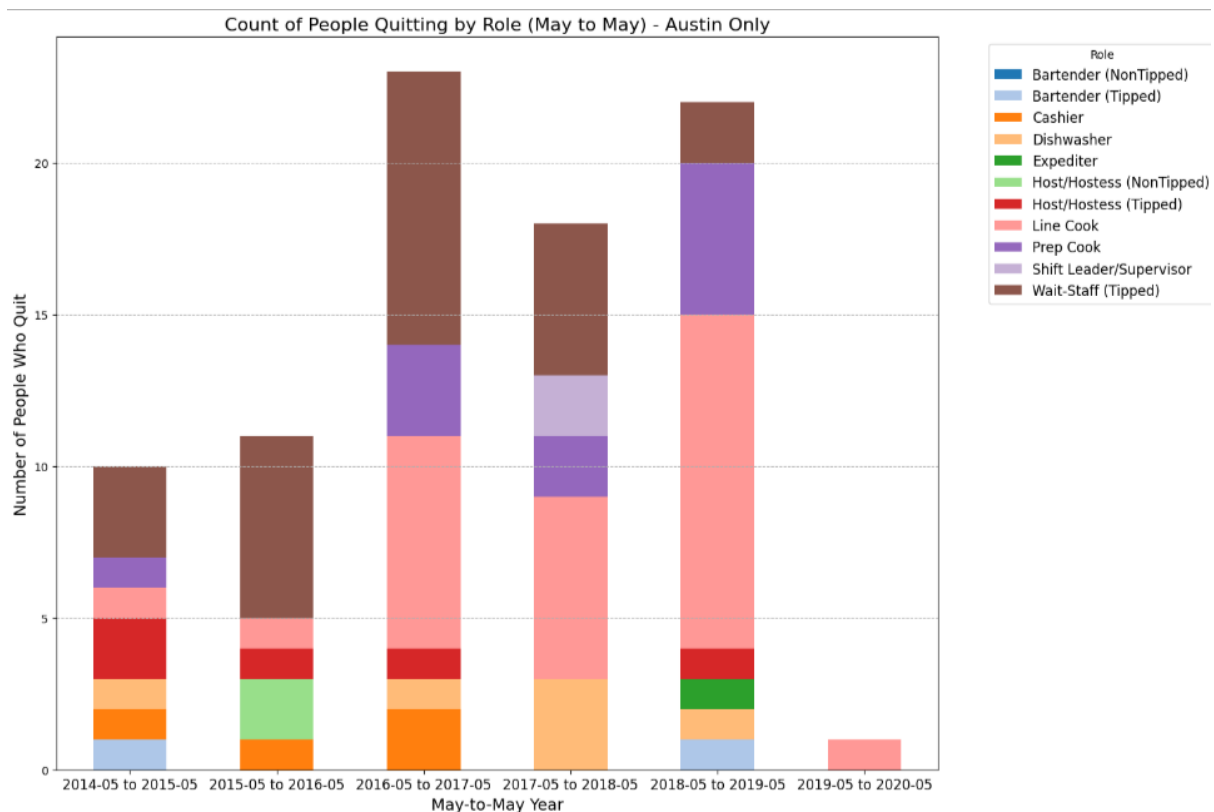
### 2.2.1 Plot 2: Labour Mobility Trends in Austin



Plot (ii): Labour Mobility Trends in Austin

- **Insights:**
  - **Quit rates** spiked sharply following Uber and Lyft's exit, directly affecting labour availability.
  - **Stable wages** suggest that financial incentives weren't enough to prevent turnover, emphasizing the role of alternative employment opportunities.
  - **Tenure** was rapidly increasing during the pre-exit phase, however saw a stable trend during the exit of Uber & Lyft, and again increased a few months after the return.
- **Analysis:**
  - The trends of increasing tenure pre-exit, **stable tenure** during the exit, and **spiking quit rates** suggest a strained labour market. Long-term employees stayed on, maintaining workforce stability, while newer employees left in large numbers, leading to high turnover. This imbalance created operational strain, as restaurants relied heavily on long-tenured staff to cover for gaps, causing burnout and inefficiencies. The inability to replace departing workers directly impacted service quality during Uber and Lyft's exit.
  - The combination of **stable wages** and challenging work conditions (e.g., understaffing and increased workloads) pushed employees to leave and seek better opportunities in jobs offering higher or more stable incomes.

## 2.2.2 Supporting Plot: Count of People Quitting by Employee Role Over Time



Plot (iii): Quit Rates by Role Austin

(Supporting plot for Plot ii, emphasising Quit over Avg Wage, Avg Tenure)

- **Insights:**
  - A significant spike in employee quits increase occurred from May 2016 to May 2017, contributing to highest number of quits even after the subsequent years, especially among waitstaff and cooks.
  - Role-specific trends highlight the vulnerability of front-of-the-house and back-of-the-house roles during periods of a labour market disruption.
- **Analysis:**
  - Front-of-house roles like waitstaff and hosts (tipped), which are more sensitive to turnover, saw disproportionately high quit rates (40% increase) during the exit period compared to previous year. These roles depend heavily on interpersonal skills, which are difficult to replace quickly, leading to visible declines in service quality.
  - Meanwhile, back-of-house roles like cooks and dishwashers also experienced instability and high quit rates (from 1 line cook quitting in 2015-2016 to 11 back-of-the-house staff during the Uber & Lyft exit year), however they were still able to mitigate some of the impact on food quality. (We can see that negative food quality reviews were increasing but less compared to Service Reviews during the exit phase in Plot i).

### 3. Business Insights and Recommendations

#### 3.1 Key Findings

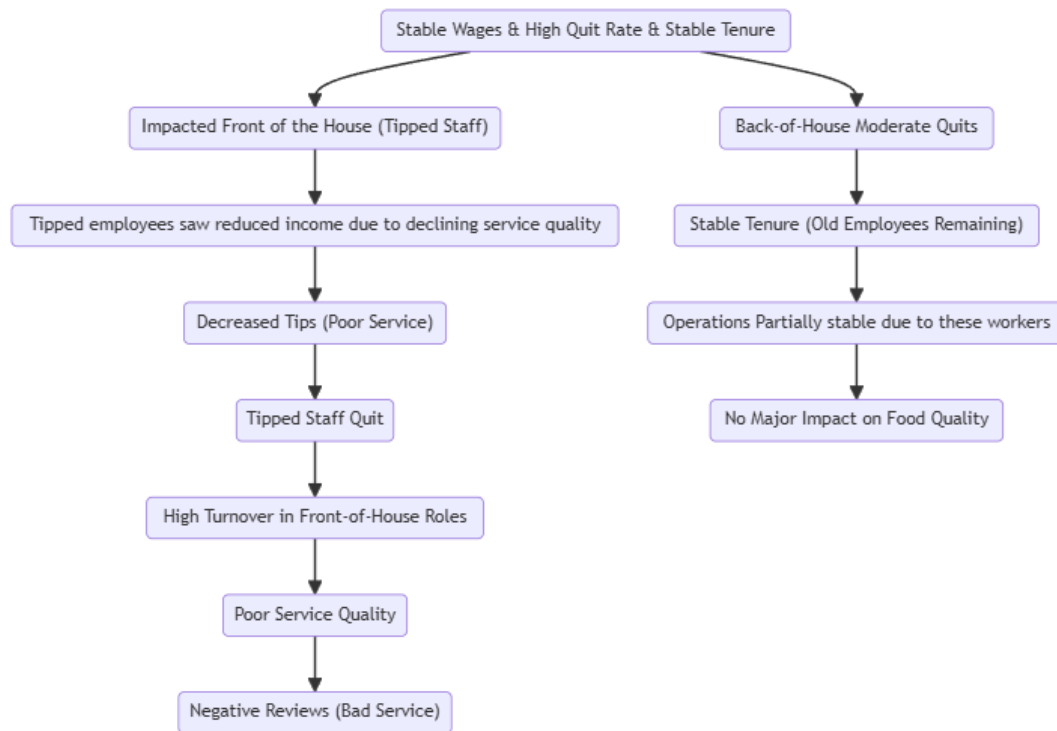


Fig (i): Flowchart explaining Labour Mobility Trends with respect to Service & Food Quality

- Many restaurant workers rely on affordable and flexible ride-sharing options like Uber and Lyft for commuting. Their exit likely made travel to and from work more difficult, costly, and time-consuming. This may have prompted workers to quit in search of more accessible job opportunities.
- Fewer customers may have visited restaurants due to the absence of convenient ride-sharing, leading to reduced tips and earning opportunities.
- Front-of-house roles were highly sensitive to mobility disruptions and hence service quality suffered due to labour shortages caused by increased employee quits.
- Food quality reviews remained stable, likely because kitchen staff provided partial stability.
- The reliance on long-tenured employees (i.e. back-of-the-house roles) during this period may have temporarily maintained operations but could not offset the effects of high turnover.
- Service quality suffered more significantly than food quality, suggesting that customer-facing roles were more directly impacted by the labour market and operational challenges during Uber and Lyft's exit.

### **3.2 Business Recommendations**

- **For Restaurant Businesses**
  - Retain Staff: Flexible hours, skill programs, and guaranteed minimum earnings for tipped staff.
  - Build Resilience: Cross-train employees and offer loyalty bonuses to long-tenured staff.
- **For Local Governments**
  - Support Mobility: Subsidize commutes and expand public transport for workers.
  - Set aside contingency funds to offer temporary bonuses or guaranteed minimum earnings for tipped and non-tipped staff to reduce financial strain.
- **For Ride-Sharing Platforms**
  - Collaborate: Partner with restaurants (or other affected area) for shared rides or discounted options for employees.
  - Establish pre-agreements with local ride-sharing or shuttle services to provide affordable worker commutes during disruptions.
  - Allow ride-sharing among people travelling towards similar places to overall reduce to burden of cost. Making it affordable in customer side and profitable for the driver.

### **3.3 Conclusion**

The exit of Uber and Lyft disrupted labour mobility in Austin, significantly impacting restaurant operations. Absence of affordable mobility made it difficult for customers as well as employees to commute, adding to dissatisfaction. This afterwards led to less tips, lowered income and increased quit rate among employees.

Service quality declined sharply due to high turnover in customer-facing roles (which rely heavily on tips). In contrast, food quality had minor negative impact, supported by long-tenured back-of-house staff who provided partial operational continuity.

Key mechanisms behind these changes included disrupted commutes that made it difficult for employees to access their workplaces, reduced customer footfall. Stable wages were insufficient to retain employees, emphasizing that reduced mobility, job availability with higher wages were key reasons of high employee turnovers.

This analysis underscores the critical interdependence between the platform economy and traditional industries like restaurants. The findings emphasize the need for businesses, policymakers, and ride-sharing platforms to collaborate on proactive measures. Addressing labour mobility challenges, improving job accessibility, and supporting workforce stability will be crucial to mitigating disruptions and ensuring resilience in the face of future crises.