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Study on the Economic Impact of Uber in Switzerland

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Content

Executive Summary

This study offers a detailed assessment of the economic impact of the platforms of Uber and Uber Eats in Switzerland, focusing on the ways these platforms have contributed to innovation in the mobility sector, to work, and to economic value added in the relevant sectors since Uber's entry into the Swiss market in 2013. Uber's ride-hailing service has become an integral part of the country's urban and suburban transportation system, providing a flexible, accessible, and affordable alternative to traditional transport methods. The introduction of Uber Eats further extended this contribution by offering a seamless food delivery service that benefits both consumers and the restaurant industry and is today available to 85% of Switzerland's consumers.

The analysis focuses on three major areas: **economic surplus creation**, **Gross Value Added (GVA)**, and **broader socioeconomic impacts**, for the year 2023. Uber facilitates substantial economic surplus, estimated to be 731 million CHF, by providing drivers and couriers with flexible work opportunities, offering earnings potential that accommodates varying work schedules, and by providing reliable, safe, and flexible services to consumers.

On the consumer side, Uber provides a convenient and time-efficient transportation option. Surveyed riders reported significant time savings, with Uber trips typically reducing travel times by over 50% compared to alternative modes of transport. These savings translate into increased convenience, particularly when public transport is slow or less accessible at certain locations or periods. In addition, an expected 37% of trips would have not been taken if Uber had not been available. **Users reported strong preferences to keep access to the Uber app**, with an estimated value corresponding to **704 million CHF/y** or 0.09% of Switzerland's GDP. Time savings alone, estimated somewhat conservatively, correspond to **3.3 million hours annually**.

In terms of overall economic contribution, the study estimates the **Gross Value Added (GVA)** generated by Uber and Uber Eats at **297 million CHF annually** (167 million from Uber Rides and 129 million CHF from Uber Eats), supporting over **5500 full-time equivalent jobs**, or more than 1 in every 1000 jobs of Switzerland. This includes the direct earnings of drivers and couriers, as well as the indirect economic activity generated through related industries such as car maintenance, fuel, insurance, and restaurant operations. Uber Eats plays a crucial role in driving growth for Switzerland's restaurant sector, with around **51% of food orders on Uber Eats representing new catering demand**, rather than substituting traditional dining orders. This additional demand has provided a significant additional revenue opportunity for restaurants and other catering businesses. Our estimate for hourly gross earnings for earners on the platform, after platform fees, is 27.9 for drivers (Rides) and 23.0 CHF/h for couriers (Eats). Some uncertainty remains regarding the most accurate calculation of these earnings, as detailed information on how earners spend some specific part of the logged-in time is unavailable.

Beyond the quantitative economic impacts, the study highlights several **qualitative benefits**. Uber's platform lowers barriers to entry in the labor market for drivers and couriers, offering an accessible income stream for individuals who may face challenges entering more traditional employment sectors. The flexibility to choose work hours and adjust workloads allows earners to balance their professional commitments with personal responsibilities, such as family care or other employment. Drivers and couriers highly value flexibility, often citing it as both a key reason for joining and a major factor in their satisfaction with the platform. This combination of low entry barriers and work-time flexibility makes Uber likely an attractive option for marginalized groups or individuals seeking part-time or supplementary income to make ends meet. Based on survey results, the calculated **value of flexibility for earners on Uber is**

84 million CHF/year. A tentatively estimated **earners surplus**, which may be interpreted as an advantage from being able to work on Uber instead of in a next-best opportunity, is 3.0 to 4.4 CHF/h, totalling approximately **26.8 million CHF annually**.

The **nighttime economy** also benefits significantly from Uber's services. A large proportion of Uber rides take place during late-night hours (when for e.g. public transit services are running at a reduced rate or sometimes not at all), particularly on weekends. This improves accessibility and safety for people engaging in nighttime activities, such as dining and entertainment, by offering a reliable and likely safer transport option when public transit is reduced or unavailable.

Overall, Uber's contributions to Switzerland's economy are substantial. The platform's role in **economic surplus creation** reflects the additional value generated for both earners and consumers. Uber's impact on **Gross Value Added** (GVA) shows the significant role it plays in supporting broader economic activity and job creation for example in the transportation and restaurant sectors. The platform's emphasis on **flexibility** has created a unique model for economic activity that offers opportunities to a wide range of individuals, from those seeking full-time work to those needing flexible, part-time income.

While the study highlights Uber's substantial contributions to the impacted economic sectors in terms of Gross Value Added and sectoral employment, it is important to note that the specific figures calculated are subject to uncertainties, and that they do not represent a 1:1 net increase in GDP, as certain activities may substitute other forms of employment or economic activity in a process that cannot be precisely quantified. Nevertheless, Uber's role in providing flexible jobs with low barriers to entry, and very substantial benefits to consumers remains clear.

1 Introduction

1.1 Background

Uber's entry into the Swiss transportation landscape in 2013 signaled a significant shift in the country's mobility trends. Over the past decade, the ride-sharing platform-operator has become an integral part of Switzerland's transport ecosystem, extending services beyond major cities like Zurich, Basel, Geneva, and Lausanne, to smaller cities, such as Thun, Fribourg and Saas-Fee. This widespread adoption of Uber is indicative of a strong demand for innovative, flexible, and affordable transportation solutions. Uber Eats launched in Switzerland in 2018 and proved to be especially critical for many restaurants during the COVID pandemic and the subsequent restrictions on restaurants. Today, the services of Uber Eats are available to 85% of the Swiss population.

Uber's influence in Switzerland extends beyond the transport industry, sparking noteworthy economic discussions. As a digitally driven entity, Uber stimulates the digital economy and catalyzes technological adoption among users. In many ways, the platform can constitute a channel for additional revenues for local businesses, possibly generating additional demand and enabling those businesses to tap into demand from new (potentially international) consumers. It also creates easy access to the labor market, thereby contributing to the country's labor market and overall economic activity. With Uber Eats, there are in addition new growth opportunities for restaurants – and a large population that can benefit from reliable food service whenever they desire.

There are also potential indirect economic benefits. Uber can foster greater connectivity, potentially stimulating commercial activity by increasing accessibility to businesses (for example in tourism; airports; train stations; helping businesses implement new business models such as expanding existing kitchen space in order to satisfy additional demand through the platform). This comes on top of the basic time and cost savings for customers.

The extent of these economic advantages remains underemphasized and not well understood, warranting a thorough analysis.

Against this backdrop, Uber has tasked HSLU with a study of the effects of the activities of Uber and Uber Eats within the Swiss economy, for the year 2023. This study therefore seeks to explore and quantify some of the most salient positive economic impacts of Uber in Switzerland, providing valuable insights for policymakers, stakeholders, the public, and Uber. Quantifying potential downsides, such as a potential for increased carbon emissions in those cases where an Uber ride replaces public transport rather than, e.g., a conventional taxi ride or a trip with a private car, are not part of the study. The same goes for a potential increase in the use of public transit, as it can be seen in Uber's data that their ride hailing services are often used to cover the first and / or last mile to public transit stations.

1.2 Nomenclature

Terminology used and abbreviations

Uber	Uber services combined: Uber Ride-hailing & Uber Eats
Uber Eats	Uber food delivery service
Uber Rides/Ride-hailing	Uber driving service (moving clients)
CuP	Courier-under-partner
Courier	Uber Eats delivery driver

Driver	Ride-hailing driver
DuP	Driver-under-Partner
IO	Independent operator (independent driver or courier)
Clients/Customers	Combined Uber Riders & Eaters
Eater	Uber Eats client
Rider	Uber ride-hailing client
GVA	Gross Value Added
Opex	Operating Expenditure
FSO (BFS)	Federal Office of Statistics, Switzerland
FTE	Full-time equivalent (jobs)
TCS	Touring Club Schweiz
WTP	Willingness to pay

1.3 Scope

This study assesses and presents the positive economic contributions of Uber and Uber Eats in Switzerland, focusing on their roles as platforms that enable decentralized creation of multiple valuable services. The analysis primarily employs quantitative methods, with qualitative analysis used where more appropriate. The core focus is on the economic effects that arise from the matching of earners and customers, which in turn generate economic activity both directly and indirectly.

Rather than examining Uber's expenditures and revenues as a company, the study focuses on the value added by the platform to the broader economy through its facilitation of services. Three distinct categories of economic contributions are explored:

1. **Economic Surplus Creation**: This category quantifies the additional economic value generated by Uber and Uber Eats, such as extra revenues for drivers & couriers and the monetized value of time saved for consumers. These effects highlight the economic gains that are specifically enabled by Uber's services and are less likely to be offset by substitution effects. If calculated well, they mostly represent elements of economic "welfare" created by the voluntary exchange between earners, merchants (including restaurants), and clients via the Uber matching platform.
2. **Gross Value Added (GVA)**: This category includes the economic activities directly and indirectly associated with Uber. It distinguishes between direct effects (e.g., net income of Uber drivers and couriers), indirect effects (e.g., economic activity associated with related expenditures like car maintenance), and induced effects (e.g., spending of disposable income by drivers and couriers).
3. **Miscellaneous**: This category explores several salient qualitative (and partly quantitative) indicators of the broader, less tangible economic and social impacts of Uber and Uber Eats, for which a monetized economic net effect estimation is not feasible within the scope of this study. Example topics are the economic impact on catering businesses, the value of flexibility for drivers, benefits for marginalized groups, potential benefits for the nighttime economy, and environmental impacts.

The study primarily focuses on value creation within Switzerland, with a particular emphasis on how these platforms contribute to the Swiss economy. The findings offer a comprehensive view of the economic relationship between Uber as a platform and the broader society and economy.

1.4 Approach

1.4.1 Surplus

Measuring surplus on the worker-side and on the consumer-side is not trivial. In particular "work" is so multifaceted, and any economically meaningful "welfare" or "utility" is so complex, that a single surplus number estimated, in whichever way, for workers, necessarily provides only a partial, a limited view on the topic. The study concept pragmatically foresaw approaching the topic in a simplified way, asking earners on the Uber platform about two of the arguably most salient effects for Uber workers on the platform:

1. How much more or less do they earn than they would in the next best job they'd expect to have in the absence of Uber
2. How much do they value the particular flexibility the platform provides

Complicating the issue was, eventually, that a limited but non-negligible share of 'first-best Uber alternatives considered by the earners would have included jobs that can potentially also provide some of Uber's flexibility regarding working daytimes and/or amount of time worked, which therefore had to be factored into the estimated net welfare benefit of Uber.

For consumers, the simplified approach consisted in eliciting the willingness to pay (WTP) to continue using the app, or, more precisely, the willingness to continue using the app compared to receiving a compensation for *not* using the app in the coming month.

It is natural that on both the earner and the consumer side, there are elements that could imply the most natural, theoretical estimate of the surplus would be higher or lower than our values thus estimated. We consider the estimates created as reasonable first estimates, with arguably non-negligible uncertainty, but created with useful approaches accounting directly for some of the most salient features of the market.

1.4.2 Gross Value Added

Gross value added associated with Uber is calculated as a sum of three distinct components:

Direct effects

Gross value added corresponding most essentially to net income of Uber earners. This corresponds to gross earnings of Uber drivers, minus drivers' costs (e.g., car costs, which in turn contribute positively as expenditures in the form of indirect effects).

Indirect effects

Gross value added, which is created via the activity of Uber services as demand in other companies. These include elements such as car purchase and maintenance; electricity or fuel expenditure; platform fees paid which represent revenues elsewhere.

The case of Uber Eats is special in this regard: Large shares of the client spending relate to the restaurant meals sold directly (and less the delivery itself), however, it is natural that consumers would have eaten something also if Uber didn't exist (albeit with some uncertainty as to whether this had been home cooking, dine-out, or traditional deliveries), potentially even from the same restaurant itself. Only the incremental demand for catering food, therefore, as identified based on client survey answers, is therefore counted in the GVA estimate.

Induced effects

Gross value added directly generated by the spending of income of drivers and couriers in other companies, not directly related to the Uber work activity itself.

In addition to the GVA, jobs associated with Uber activities are statistically estimated. The focus lies on value created within Switzerland itself, so where large outflows to abroad are expected, these are not included in the value added calculated. The value added and job values are relevant to understand Uber's impact on the main sectors concerned.

1.4.3 Uncertainties

Any analysis can only be as good as its input data. A large part of the study, especially the surplus estimates, is based on analyzing HSLU survey results, i.e. self-reports from Uber platform clients and earners, which can theoretically contain biases whose magnitude we cannot estimate. The analysis generally takes the survey answers as given facts, disregarding only values that seem clear outliers/clearly implausible. Biases in self-reports cannot be excluded, even if for the purpose of the study, Uber was strictly prevented from receiving any type of individual answers from users, and to emphasize this to survey invitees before they took the survey. In the types of questions asked from drivers active on the Uber platform, where we aim to notably elicit the 'surplus' users receive from using the app, either on the offer (drivers) or on the demand (clients) side, there is a certain risk that users instinctively provide answers that lead to smaller-than-actual estimates of the surplus created by the app: as app user concerned about potential future increases in fees for anyone involved, i.e., a user concerned about a stronger surplus extraction by the platform provider, might be inclined to indicate a low values for her benefit from/interest in app usage, reducing the values of the surplus and/or GVA estimates in the present study.

The limited data available, the particular nature of work on digital platforms, and uncertainties for example from the analysis of survey data with limited responses, lead to important uncertainties. The guiding principle adopted for dealing with the major uncertainties encountered in the analysis, is to clearly flag the uncertainties and to take an intermediate view. In doubt, rather than too progressive assumptions, rather conservative ones should be taken in terms of estimating the economic impact of Uber, for calculating the main results.

1.4.4 Survey of Uber platform users

We conducted surveys, for Uber earners and customers, with partly different questions for Rides and Eats. These surveys consisted of around 10 mostly multiple-choice questions and included randomized answer options to elicit unbiased responses.

Survey questions were designed to gather insights specifically for evaluating economic surplus creation, as well as for supporting the assessment of economic GVA and various broader effects. The HSLU team developed the content of the surveys and executed these on a dedicated third-party platform. To ensure confidentiality, and to elicit unbiased answers, Uber itself did not get access to individual survey responses. Uber staff provided valuable feedback on formulations to ensure the questions were understandable and made sense within the context of the Uber platform usage by drivers and clients, and, in particular, to ensure they are in line with corporate legal requirements.

2 Data & concepts

2.1 Data sources and weighting

Data used in the study stems from primarily four different types of sources:

- Proprietary Uber data, partly confidential: This includes mostly basic aggregate data such as active clients and earners on the Uber platform, the hours worked in different modes, mileage and split by type of vehicle used. Barely any data on individual Uber users was available for the study, partly because Uber does not collect and own highly detailed user-specific data, partly because of data-protection reasons.
- Survey data collected in the HSLU survey: Earners and clients were surveyed to collect important data for the calculation of GVA, surplus, and on various related topics for quantitative or qualitative interpretation of the economic and social role of the Uber platform.
- Public literature and data sets/statistics, mainly on the Swiss economy and population, vehicle costs, intermediate input shares in various economic sectors to support GVA calculation etc.
- Data collected from various public administrations, most notably to better understand the relevant types of administrative costs of doing business or Uber earners.

Where relevant, survey answers were typically weighted to adjust for empirically estimated answer probabilities (leading to a minor weighting adjustment[1]), and, where appropriate, for the monthly trip count per user.

2.2 Working time concept in the platform service sector

When working on the Uber platform in Switzerland, earners freely choose when and for how long they go online as well as which (and how many) rides to accept or reject. They also have options to influence the price of their services. For Rides, they can apply a multiplier from 1.0 to 3.0 to the basic price grid available on the Uber platforms. E.g. by applying a multiplier of 2.0, they will only receive trip requests at twice the amount which would result by applying the base price grid available in the app. Couriers using the eats app can define their price per kilometer.

P1, P2, and P3 time

In examining the labor economics of rideshare services such as Uber, it is crucial to delineate the distinct periods of an earner's activity, commonly referred to as P1, P2, and P3 times. These periods are foundational for assessing an earners' earning potential, operational efficiency, and the regulatory environment's impact. The following provides an overview of each period, at the example of Uber Ride-hailing – for Uber Eats, the classification is analogous.

1. P1 Time

This phase involves the driver being logged into the Uber app but not having accepted any ride requests yet. P1 is significant for understanding the economic efficiency for drivers, as, on the one hand they are free to use their P1 time *also* for non-work, or even for other work (e.g. working for a direct competitor of Uber while being logged into the Uber App), but on the other hand during P1 time they can also incur personal (opportunity) costs (concentration on

[1] Min weight 0.7, max weight 2.1, with 90% of weights lower or equal to 1.2.

upcoming work opportunities, fuel and vehicle depreciation, etc.) without generating revenue. This period also influences strategic decisions regarding optimal times and locations for logging into the app, considering expected demand.

In Switzerland, in contrast to some other regions with Uber activity, P1 time has the particularity that there are neither limits nor specific incentives affecting how long an earner may be 'logged into P1' without accepting any trip offers: Unlike in some other regions, there are no bonuses for accepting a higher share of the offered trips, and there is no "push offline" mechanism logging the earner out of the system even when he may have declined numerous trips in a row during multiple hours, i.e., when he may likely be de-facto unavailable for trips.

2. P2 Time

Commencing when the driver accepts a ride request and proceeding until the passenger is picked up, P2 marks the initiation of specific prospective earnings. The distance to the pickup location can substantially impact the driver's earnings and operational costs. This period is crucial for evaluating the cost-effectiveness of trip acceptance and routing efficiency.

Thanks to the transparent offer cards earners receive, an earner knows her revenues for P2 and P3 time taken together. From a purely economic perspective, P2 and P3 time can therefore be mostly considered as one phase from the earner's perspective.

3. P3 Time

This period begins when the passenger enters the vehicle and concludes at drop-off. P3 is the primary earning phase for the driver (in combination with P2), where revenue is generated based on a combination of distance and time. Factors such as route efficiency, time of day, and trip length are pivotal in determining profitability during this phase and are factored in by the algorithm when determining the price which is offered to the rider (who can choose freely to accept the trip or not).

During P2 and P3 time, earners are clearly dedicating their time and resources most essentially and unambiguously to the driver work in question, analogous to the traditional concept of "working time" in conventional jobs. This is very different in the case for P1, challenging traditional notions of working time. To complicate things, while the importance of P1 time can vary across time and location, it is often a substantial share of the total of P1 through P3, so its treatment can strongly impact some KPI in an economic assessment of the Uber labor market. However, as mentioned above, it is possible that what is counted as P1 time on the Uber platform, is actually time when a driver is generating revenue outside of the Uber App, by using for example a direct competitor of Uber or providing trips via a taxi dispatching central. These economic gains are not part of this analysis.

Treatment of P1 time

The substantial P1 time, where earners are logged into the system but are not yet actively occupied with any particular client task, is highly ambiguous: This is when earners may or may not be most essentially dedicated to 'working' on Uber as opposed to pursuing other aims. Other aims may include almost any "other" occupations a person might spend her time on: playing chess in the car, watching TV at home, working for a different platform (Uber Eats vs. Rides, other delivery services, working for private clients, receiving dispatches from a traditional taxi dispatcher etc.), or driving from home to the preferred Uber standby area in the city ('commuting' to work), doing phone calls or messaging, consuming social or other media, etc.

Hence, P1 time makes work, and in particular "hourly earnings" on platforms like Uber not readily comparable to traditional work, where working and non-working time tends to be more strictly separated (although with home office, or to some degree even already simply with smartphone use at the workplace, lines have become blurrier also on other types of works).

This is a well-known issue in literature. Some concepts that enjoy popularity have emerged, to define a particular share of P1-time as accountable work time, in particular 'P1-directly-leading-to-trip', i.e. P1-time (maybe without declining of any customer in the meantime) that is directly preceding a P2 and then P3 phase. Upon closer inspection, we deem the P1 time included in P1-directly-leading-to-trip an unconvincing proxy for the time that would readily correspond to traditional working time. It turns out to be too arbitrarily defined and not necessarily closely related to what one would naturally define as the time most closely reserved for work for the specific platform in question. To avoid any false pretense of having solved the problem in a conclusive way based on analyzed data, we prefer to indicate results for hourly earnings, using the following intermediary choice: Half of P1-time is accounted for in the calculations.

With the presence of competing ride-hailing platforms in Switzerland, it is well known that a significant share of drivers tends to be active on multiple platforms simultaneously. Also, a significant portion of the drivers using platforms are licensed taxis. They might therefore be doing street-hailing or getting demand through a traditional dispatching center while also being logged in into the app. This means 'P1'-time is shared between different platforms or services. These can be multiple ride-hailing platforms, or it can conceivably include even some workers being on standby for both Uber ride-hailing and Uber eats services simultaneously.

2.3 Gross revenues, cost of doing business, net earnings

Gross revenues, net of platform fees, earned by drivers are derived from aggregate data provided by Uber. Cost of doing business, most notably direct car costs but also other fees and potential taxes, are calculated based on a variety of sources, including basic Uber data on km driven with different vehicles, public data on a range of relevant vehicle fixed and variable costs, insurance and taxes, as well as administrative information about typical licensing costs among others. These costs are deducted from the gross earnings to arrive at net earnings (without deducting social security contributions which other, employed workers elsewhere would also pay from their own salary).

The majority of earners on the Swiss Uber platform are independent operators (IOs), and a minor share, the "Drivers-under-Partner" (DuP), has a genuine employer, using the platform as an additional revenue channel for the business and generating additional demand for the business and the drivers. As the share of DuPs is rather small compared to all earners on the Uber platform in Switzerland, the study does not specifically focus on DuPs but instead implicitly treats all drivers as IOs.

Hourly gross earnings, calculated when considering P1 through P3 time in the way detailed above, and after platform fees, are 27.9 and 23.0 CHF/h for drivers (Rides) and couriers (Eats).

As major costs of doing business, the following categories are factored into the GVA and surplus calculations:

- License for professional transport of persons
- Insurance costs
- Further fixed and variable costs of holding and driving the vehicle (including purchase, maintenance, and energy)
- VAT for the limited share of earners potentially subject to it.

The share of car fixed costs accounted as attributable to Uber can be substantial, estimated to be for example higher than 30% of the total car fixed costs for Uber Rides drivers, based on the evaluation of survey responses (see below): A non-negligible share of earners indicates (i) they would have no car if it wasn't for working as driver on Uber, and others indicated (ii) they would have significantly cheaper cars if it wasn't for their driving on the Uber platform (details below).

VAT has been assumed to be paid by 10% of workers.[2]

Calculated license costs are small. Expressed per hour of working time, it is less than 0.1 CHF/h for Uber drivers. Insurance for Uber drivers is estimated to be between 0.2 and 0.3 CHF/h and remaining fixed and variable costs for the cars between 5 and 6 CHF/h (not all accounted working time is active driving, see above). The main vehicle costs have been calculated based on public data available for the various types of fixed and variable costs from Touring Club Switzerland (TCS). In the interpretation of the data, it is important to consider that the average hourly mileage is rather low when compared to a normal car usage. Vehicle leasing appears to be uncommon for earners on the Uber platform in Switzerland, with more than 80% of the earners owning their vehicle.[3] We therefore consider vehicle fixed and per-km costs based on general TCS statistics. In the calculations, the different types of vehicles (ranging from cars and motorized bikes to bicycles) and their different cost structures have been considered, separately for Ride and Eats.

After deducting these costs of doing business, the average **net earning rates** for earners on the Uber platform are found to be **22.2 and 21.7 CHF/h for drivers and couriers**:

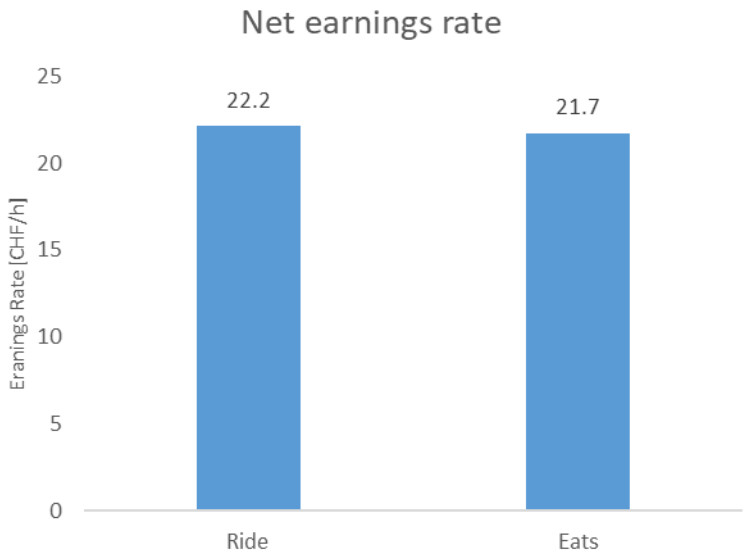


Figure 1 Earnings rates

The indicated earnings are net of costs for licenses and car fixed and variable costs including insurance. Hourly earnings are almost similar between Rides and Eats.

As for all workers in Switzerland, regular earners on Uber will have to pay social insurance contributions, which the GVA analysis will consider separately.

2.4 Restaurants

More than in any other domain in the platform economy analyzed, there is a strong direct substitution between the meals ordered via Uber and consuming catering meals via other

[2] We expect that this leads to a conservative net earnings estimate, as in reality, maximally a very small share of drivers could potentially qualify for VAT from driving on Uber alone (>100 000 CHF/y earnings). Other independent revenues count too towards the threshold.

[3] Also, specifically for cars on Uber, 4/5th own their car.

channels (dining-in at a restaurant or collecting/ordering take-away directly from a restaurant without intermediary). In this case, the value-added accruing in restaurants from Eats orders cannot readily be approximated as being almost exclusively additional.

In consequence, we survey the Uber Eats customers as to what type of meal they would have consumed instead if they had not ordered Uber Eats, to understand and account only for the meals that are "incremental" from the catering perspective: meals that otherwise would have not been purchased from a restaurant or take-out (or grocery offering take-out).

3 Economic Surplus Creation

3.1 Flexibility value for earners

The value of flexibility has been found to be a major benefit from work on the Uber platform in the international scientific literature.[4] We here study the topic for earners on the Uber platforms in Switzerland.

3.1.1 Daytime and duration flexibility values

The value of flexibility, as monetary preference to keep work time flexibility, was elicited using discrete choice questions, separately for (i) flexibility to work during daytimes of choice, and for (ii) flexibility to choose the amount of hours worked:

A) Daytime flexibility:

Which of the two options would you rather choose?

- *You retain the right to decide for yourself what time of day you want to work.*
- *You receive x% higher pay, but have to work at set times of the day (you can still choose the total number of hours).*

B) Duration flexibility:

Which of the two options would you rather choose?

- *You retain the right to decide for yourself how many hours you want to work.*
- *You receive x% higher pay on average, but have to work a set number of hours each week.*

In both questions, x was randomly selected to be either of: 5, 10, 20, 30, 40, 50.

Results turn out to be rather similar between the four worker categories, in terms of share of respondents indicating a preference to keep their worktime flexibility:

[4] See e.g. Hall & Krueger, 2018

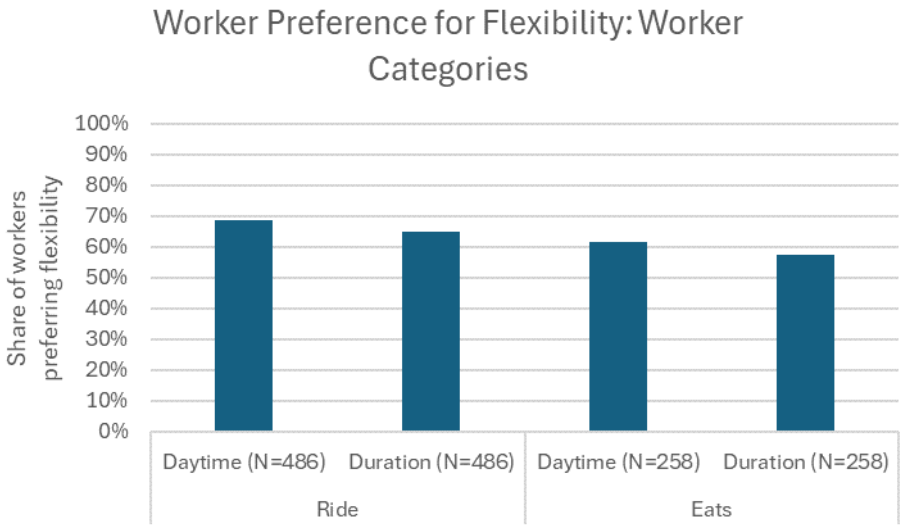


Figure 2 Worker preference for flexibility: Aggregate responses

For both, daytime and duration flexibility, differences between Rides and Eats for average preference for keeping flexibility in the data for the figure above are not significant on the 95% confidence level (neither for Daytime flexibility nor Duration). This extends for the relevant statistics for the data on the individual x-values from above (5%, 10%, … higher pay): The differences between the Rides and Eats values are insignificant based on 95% confidence level.[5]

Because of the limited and insignificant differences between Eats and Rides, and because the data is rather noisy when considering individual sub-categories only,[6] in the remainder of this section, Eats and Rides are analyzed jointly.

Higher extra earning possibilities increase substantially the probability that workers would be willing to sacrifice their current daytime and/or duration flexibility in the hypothetical experiment.

Overall, the implied willingness to pay for flexibility is extremely large. In the following we see that this remains so even for tradeoffs with very high salary increases of up to 50%. The main finding includes that around 60% to 70% of earners prefer to keep their flexibility vis-à-vis an earnings increase of 5% to 50% (randomly chosen increase according to the scale above).

Theoretically, one might want to weight the different answers, either only based on different types of respondents having different answer probabilities, or additionally multiplied by actual trip counts: assuming trip counts are roughly proportional to earnings, weighting answers by trip counts allows us to infer the total amount of monetary equivalent value of the flexibilities for the workers. We work with the unweighted answers in the following for this data set, for reasons detailed in the Appendix in 7.1.

[5] More specifically, for Daytime and for Duration separately, for each of the 6 data pairs (percentage of Drivers and Couriers preferring to keep the flexibility), the difference is below the 6-tests-Bonferroni-adjusted z-value for a 5%-alpha (already before the Bonferroni-adjustment, 11 of the 12 differences are non-significant on the 95% confidence level).

[6] This stems from the fact that only one randomized *binary* question was asked per survey respondent, meaning for each survey respondent, the data received indicated only for *one location along the curve*, what her binary choice would be.

We separately asked earners whether they would be continuing to work with Uber if they lost their daytime or their duration flexibility, but earned twice as much.[7] In each category of workers surveyed, the share who would then not work anymore for Uber, was close to 50%: On average 49% (unweighted) of persons losing their daytime flexibility would not want to work on Uber anymore, and 46% of those losing their duration flexibility. With full weighting, these values become 52% and 45%, only a negligible percentage difference.

With the observed downward-sloping curves, we can estimate the average equivalent earnings increase the flexibility benefit corresponds to, in percent of actual earnings on Uber. The following graph shows how, for hypothetical earning premiums for inflexible work of up to 50% of base earnings, the share of earners preferring the current flexible arrangement (solid lines) drops gradually to close to the slightly less than 50% of people who stated separately that even with 100% earnings increase they'd not be willing to work without any of the respective flexibilities (dashed horizontal line).

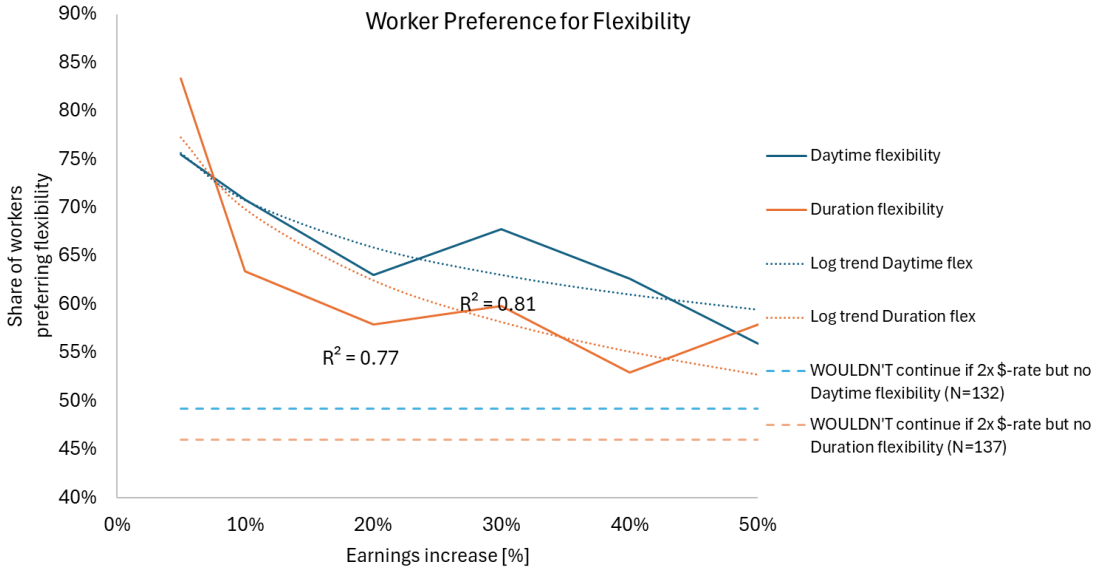


Figure 3 Worker preference for flexibility (unweighted)

There is no unique, unambiguous way to calculate the value-from-flexibility attributable to work on Uber. Based on the observations, we consider two base estimates:

- Very conservative: Assume none prefers to stick to the current conditions with flexibility if in the hypothetical alternative without the flexibility the earnings increased by more than 50% extra.
- More natural: Extrapolate the curve observed for values up to 50% earnings increases, smoothly with a regression to values of up to 100% earnings increases, such as to approach at that point the 'Give up work if twice salary but losing the flexibility'-values from the separate question.

As the two approaches lead to significant differences, and the precision of the second approach is also subject to potential biases even if it can arguably be considered the more 'natural' and less biased estimate, the average between the two estimates is retained as value considered.

[7] Wording: "Imagine you could earn twice as much with Uber, but you couldn't determine the daytimes you work. Would you continue to work as an Uber driver?" and "Imagine if your earnings per ride with Uber doubled, but you couldn't determine the duration of your work. Would you continue to work as an Uber driver?"

	Daytime flexibility	**Duration flexibility**
Very conservative	35.9%	33.9%
Natural	58.8%	55.8%
Intermediate	**47.4%**	**44.9%**

Table 1 Value of flexibility for earners on Uber, expressed as share of earnings

The values turn out to be almost identical when recalculated with full weighting (<1 percentage point differences).

3.1.2 Combined flexibility value

We have seen, earners on Uber tend to highly value flexibility with respect to *both* dimensions, daytime and duration of work. When working on the platform, the workers get both flexibilities simultaneously, when comparing their work to a usual full-time job with neither of the two flexibilities, the question is, to which degree the above estimated values of the two flexibilities are additional or complementary:

a. Additional: The earner values both the daytime-of-work and the duration-of-work *independently*, so that the overall value of being fully flexible when working on Uber is the sum of values from both two flexibilities.

b. Complementary: The earner values being able to choose when-to-work-for-how-long and considered also mostly this combined flexibility overall as the relevant feature of work with Uber, independently of whether she was queried regarding the value of the daytime or the work duration flexibility.

For this study, we lack unambiguous information as to whether a. or b. applies, as the flexibility values have only been asked *separately*, not in combination. Nevertheless, the two flexibilities tend to clearly go together. In particular, reasons for which one cannot work *during* standard daytimes, and for which one cannot work, say, standard *40-hour work weeks*, tend to be similar (e.g., daytime activities such as a different main job). Hence, the flexibilities may rather tend to be complementary, meaning the total value of both flexibilities may not be much larger than the estimated values of the two flexibilities individually.

This conservative hypothesis means, we cannot merely sum the two values obtained above, to estimate the total value of flexibility. Statistically, it was possible to derive a lower bound of the overall value of the flexibility by comparing answers for the two questions and realizing that if a driver had indicated the value for one of the two flexibilities to be at least, e.g., 20%, and the value for the other flexibility to be at least, e.g., 30%, then the overall flexibility value must be at least 30% (the larger of the two values). Such analysis can only provide a certain lower bound about the value of flexibility overall and is in that sense conservative, but there is no simple way to find from the (noisy) data a precise value without adding speculative elements.

The thus extended analysis yields an estimated value of **49.7%** of earners base earnings. This value relatively close to the two individually identified flexibility values above (47.4% and 44.9%), reflect that the indicated values of flexibility along the two dimensions were indeed relatively close to each other and consistent, supporting indeed hypothesis b. about the

relationship between the two dimensions' flexibility values. This corresponds to a total value of flexibility for earners on Uber of **84 million CHF/y**.[8]

For the remainder of the study, we use this as base estimate of the value of flexibility for earners on Uber.

In the next section, the value of this flexibility is integrated into results from hourly earnings analysis (based on data provided by Uber) and from alternative, 'next-best' earnings the drivers could have when not working on Uber, according to self-declarations in the survey.

3.2 Surplus for earners

3.2.1 Alternative occupation & earnings

To understand the opportunity cost of working for Uber, earners were asked about counterfactual employment choices: About the type of alternative work they would perform, if any, and about the earnings they would expect if they replaced their Uber workload with the next-best alternative they'd expect to be choosing/finding.

Alternative occupations turn out to be a diverse set:

[8] The value is calculated somewhat conservatively by assuming the earners' survey answers are based on their net earnings after deducting the various relevant costs of doing business, while instead many may instead consider the hypothetical earnings changes as being based on their personal gross earnings from driving.

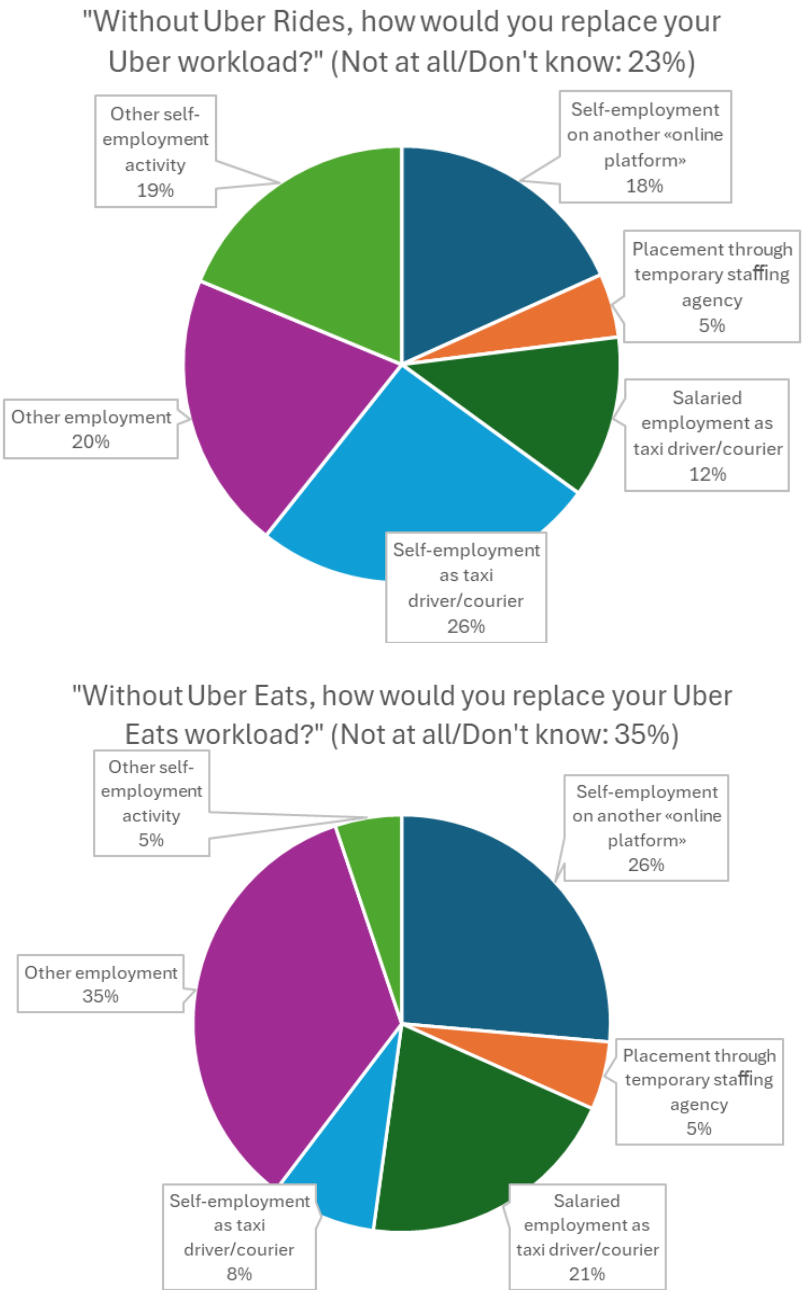


Figure 4 Alternative occupations

Earnings were expected to be 5-12% higher than on Uber:

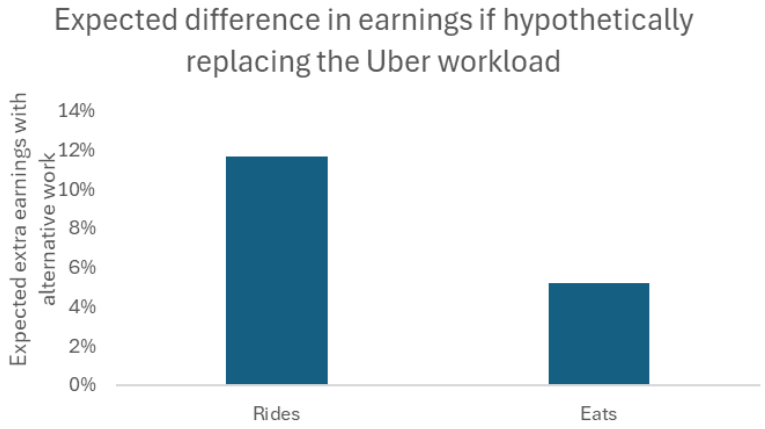


Figure 5 Counterfactual earnings differences

3.2.2 Flexibility-adjusted earnings rates and alternative earnings

Uber earners would, according to their estimation, earn 5-12% extra in a different, next-best occupation. At the same time, the flexibility on Uber is worth an estimated 36%-63% of the base remuneration to Uber earners, based on self-reports. Some of the indicated occupations Uber earners would alternatively pursue – illustrated above – may allow a substantial amount of flexibility too; we estimate up to 40%-44% of the indicated jobs would have flexibility compared to Uber, and account for this value in the calculations.

One measure for how much "surplus" or monetized advantage earners active on the Uber platform derive from their work, corresponds to the earnings plus the estimated average value flexibility while working on Uber, minus the opportunity cost of working on Uber in terms of foregone earnings from alternative work they could otherwise perform. The following graphs show this data.

Explanations: [1] is actual hourly net earnings of drivers on Uber. Adding to [1] the value of flexibility elicited from drivers [2] yields the combined earnings & flexibility value (or utility) for Uber drivers [3]. Alternative expectable earnings if earners took on a different occupation [5] equal Uber earnings [1] plus the extra earnings expectable when switching away from Uber as elicited from drivers [4]. Adding to this earning rate [5] the imputed value of flexibility of next-best jobs the workers considered, [6], yields the combined earnings & flexibility value of hypothetical alternative employments for current drivers [7].

Figure 6 Waterfall: Uber earnings and flexibility value and corresponding opportunity costs (counterfactual value)

3.2.3 Surplus estimate

The therefore, tentatively estimated surplus for workers from being able to drive for Uber, ranges from 3.0 (Ride) to 4.4 CHF/h (Eats), see Figure 7. In total, based on the total number of working hours on the Uber platform, we estimate an earners surplus of **26.8 million CHF/year**.

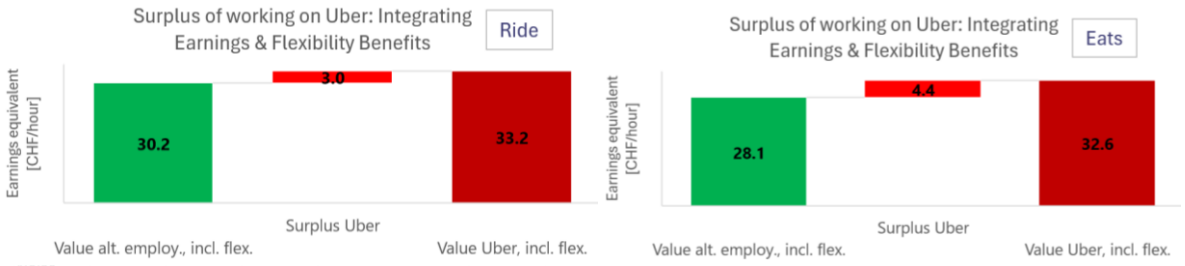


Figure 7 Estimated hourly earners surplus

Conclusion

The calculation of the surplus for earners on the Uber platform, which can be interpreted as an estimate of the general 'advantage' for earners of being able to work on the platform as opposed to pursuing other occupations, used a number of separate statistics: Statistics about (i) the average hourly earnings of earners on Uber (net of car, licensing, insurance costs etc.), about (ii) the type of alternative occupations otherwise exercised as indicated by earners, and about (iii) the expectable extra earnings in these occupations, as well as about (iv) the three types of self-reported 'value of flexibility' indicators. This enabled factoring in the most salient particularities of work on Uber in an estimation of the specific 'surplus' enabled by the Uber platform for earners.

Various assumptions used in the calculations arguably erred on the conservative side, various other specific advantages (or disadvantages) from work on Uber (for example, convenience to not only choose time and amount of work, but also the work location, or the particular interaction with riders many drivers seem to enjoy[9], or simply the value of enabling some more marginalized workers to have a job with decent earnings and regular interaction with other persons) have not been calculated, and there are multiple uncertainties in the estimate that could not readily be avoided.

Nevertheless, the results found seem a plausible (conservative) estimate of the specific 'surplus' value for earners: Between 3 to 5 CHF/h extra value from working on Uber compared to a next-best alternative job. Potentially, the value would be higher, if less conservative assumptions had been used, and if all value for earners who absolutely could not work in a less flexible setup, had been taken into account. However, it might be reasonable not to expect a much higher value, given the work has particularly low barriers to entry, where a market equilibrium between supply and demand for workers impacts the earnings rate relatively flexibly. In that sense, the fact that earned incomes, in particular when accounting for the value of the flexibility – and after deducting the costs of doing business such as car costs – seem decent on the platform and noticeably higher than in next-best alternatives, is encouraging, independently of the exact numerical point estimate here found.

3.3 Surplus for clients

3.3.1 Surplus estimate

The surplus for clients is estimated by eliciting clients' willingness to pay for continued access to the app, using randomized discrete choice questions:

If you had to choose between the following two options, which would you choose?

- *Opt to continue using Uber {Rides/Eats} for the next month*
- *Choose not to use Uber {Rides/Eats} next month and receive CHF x instead,*

with x being a randomly drawn value from: *5, 10, 20, 50, 100, 200, 500, 1000*

To remove implausible outliers, answers that implied a WTP to keep the app of more than 100 CHF/trip (more than 100 CHF/month per historic monthly trip count)[10] were considered invalid.

Answers were weighted for empirical survey-response probabilities.

[9] For more than 90% of the drivers filling in the survey, their enjoyment of the work as driver was a reason to have started working as a driver on Uber.

[10] Only the previous month's trip count data of surveyed customers was available, so it cannot be excluded that some users use the app often in general (or in the coming month) but had only few trips in our historic data, making the analysis somewhat more conservative.

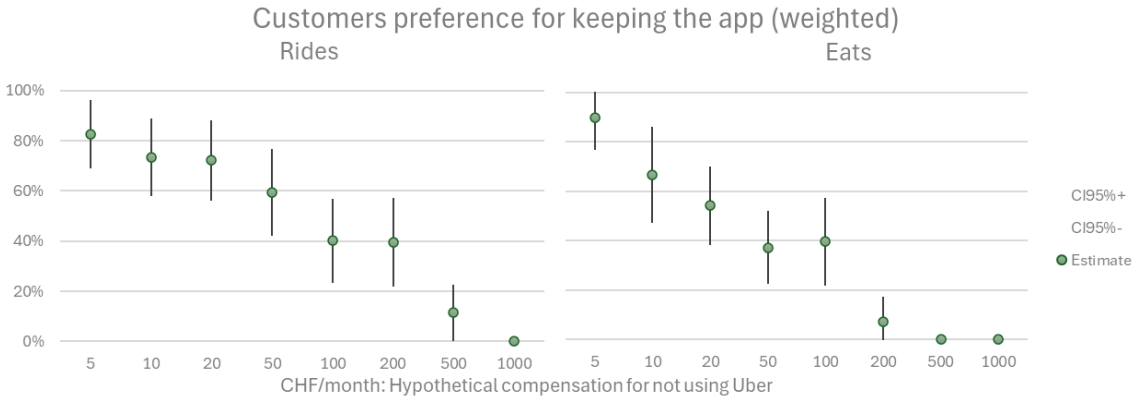


Figure 8 Customer WTP for using Uber

In weighted regressions, logarithmic curves were fit to the Riders and the Eaters data, to allow estimating by integration the average value of the Uber platform for its users.[11]

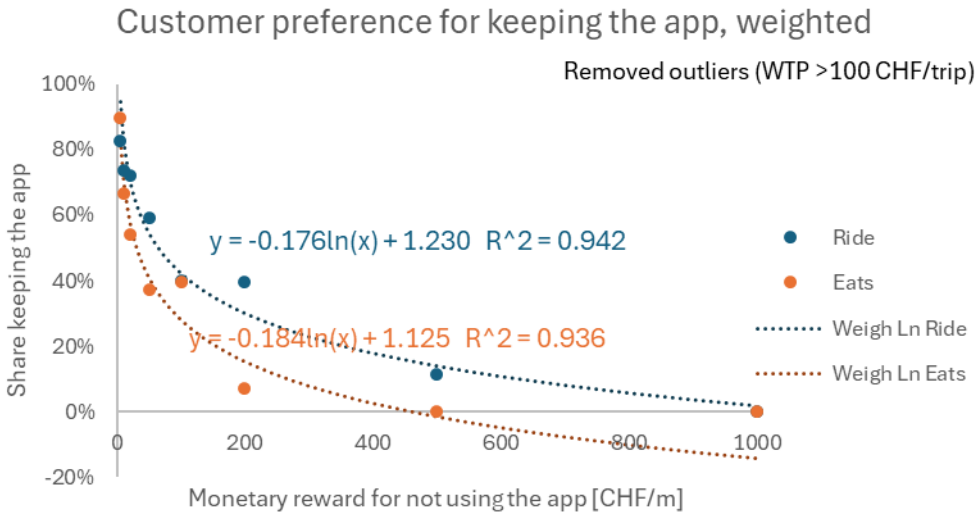


Figure 9 Fitted weighted-logarithmic curves for customer WTP for using Uber
Negative values of the fitted curve are ignored

The aggregate value (willingness to pay to keep using the app) for all users together was estimated to be **704 million CHF/y**, corresponding to **0.09% of Switzerland's GDP** of year 2023.

[11] The logarithmic curves fit the data well, with R^2-values of 95% and 96%.

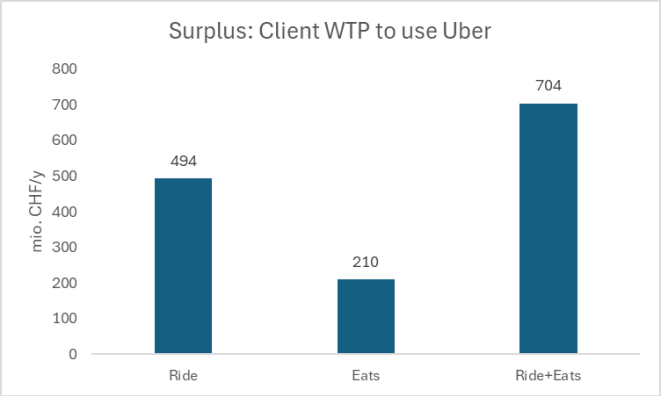


Figure 10 Absolute population WTP for using Uber

This value is much smaller in relative terms than the 0.6% of UK GDP (for Uber Rides alone) that a UK study found for the Uber client surplus, using a comparable randomized discrete choice question (Uber/Public First 2019). While we do not know the details of that study, significant differences in that direction between Swiss and UK surplus from Uber are plausible: Better public transport in Switzerland could mean (i) Uber service is available in relatively fewer areas, (ii) less people in these areas use the app, and (iii) the existing users would have a *relatively* lower WTP to use the platform. Indeed, the 5 million Uber users in the UK at the time when the study had been conducted correspond to a larger population share than the share of citizens using Uber in Switzerland, and our survey confirms public transport is indeed the most important alternative for most Uber trips (36%, see below). The Public First study was from a period where Covid had at least some positive effects on the desirability of semi-private transport, which could also help explain the difference. Finally, we attempted to remove outlier values that seemed rather implausible, and this can also explain part of the differences. Whether these differences can fully explain the large difference between our results and theirs, remains open.[12]

Especially for Uber Eats, there are established competitors besides Uber. The survey elicited customers' WTP to keep specifically access to the Uber app. The WTPs would have likely been even substantially larger if the question had been to give up usage of *all* independent public food delivery platforms.

3.3.2 Time saved (Riders)

Surveyed users reported, for those trips that they indicated they would have also taken without Uber, reported an average **timesaving of 56%** with Uber relative to the expectable non-Uber travel time.

In addition, of the Uber trips, an expected **37% would not have been taken** if Uber had not been available.[13] A conservative assumption taken is that for these trips, had the client hypothetically still decided to take them without Uber, the relative time-savings from Uber

[12] Methodology-wise the two studies appear very similar, although we do not know whether Public First tried to remove outlier values as was done in the present study.

[13] See survey results above: 32% said No, 11% said they don't know.

would also have been similar, i.e. also 56% of the non-Uber travel time.[14] In aggregate, the time savings amount to **3.3 million hours annually**.[15]

We do not explicitly use any monetized value of time saved in the remainder of the analysis. On the one hand, the value of time saved should already be included in clients' indicated WTP measured as described above. On the other hand, existing values for the value of travel time savings (VTTS) for Switzerland are strongly varied and do not seem readily applicable to Uber rides. With VTTS values between around 20 and 100 CHF/h (mostly around 30 CHF/h)[16] and the tentative time savings indicated above, the maximum and minimum value from the time savings would range from around 66 to 330 million CHF/y. This could suffice to explain not most of the client's surplus, but a major share of it. Using 30 CHF/h as a focal point would suggest a VTTS of 99 million CHF/y.

3.4 Overview & interpretation

The following figure summarized estimated surplus values such as resulting from the analysis of the above-described specific features of earners & customers and of their respective interactions with the Uber platform.

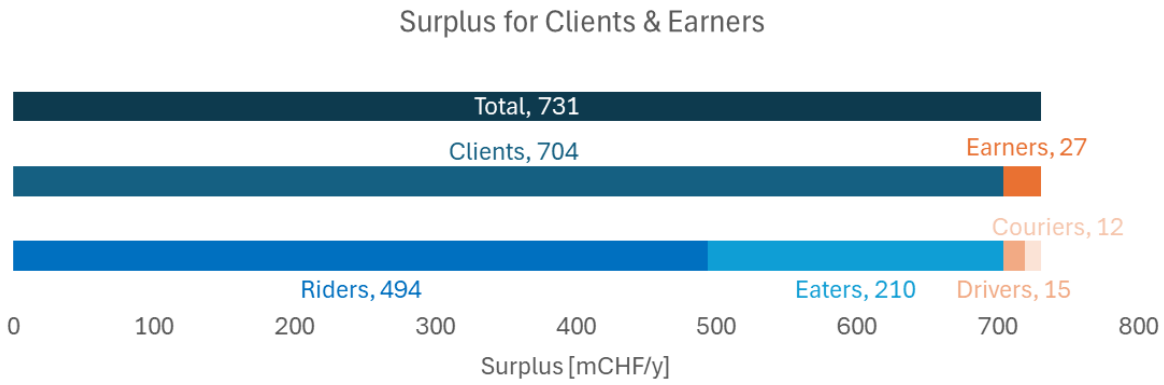


Figure 11 Aggregate surplus: earners and customers

Interestingly, a very large share of the estimated surplus arises for clients, and in particular for riders. Earners, on the other hand, gain value from earnings opportunities with arguably decent working conditions, competitive earnings rates, and low entry barriers. A key advantage for earners is the extraordinary flexibility, rare in other occupations, that platform work offers. While some of these factors are factored into the earner surplus calculation, certain unquantified benefits may further balance the surplus discrepancy observed in this analysis.

The notably larger net benefit to clients is understandable when considering that, until recently, Uber Rides was the only comparable service available, creating a potentially high

[14] Plausibly, for those trips that would not have been taken without Uber, one (important) reason could have been the major extra complications and/or time required when travelling without Uber, suggesting an even higher attributable, more hypothetical time savings for these trips.

[15] Two implausible outliers in the answers to the time questions have been removed. Without removing these, the timesaving with Uber would be slightly larger, 3.5 million hours/year.

[16] Examples: ETH 2006a Figure 4 suggests typical values of 100-140 CHF/h specifically for shopping trips for medium income classes, but it seems to be based on a limited sampled size. Schmid et al. 2021 suggests VTTS of 27-31 CHF/h for individual motorized transport but 15 CHF/h for public transport, and a Value of Leisure of 25 CHF/h (although they acknowledge this unusually low compared to the rest of the literature). ETH 2006b Table 1 reports VTTS for Business of 56 CHF/h or >100 CHF/h for business traveling already 20-25 years ago without inflation adjustment.

value for some clients due to limited alternatives. For earners, while worktime flexibility and favorable conditions are valuable, their surplus may be less pronounced. This is due to the open entry into the market and the existence of other job opportunities with comparable pay. This surplus difference remains, regardless of whether many earners rely on platform work for their primary income or if gross value added (GVA) in the sector is substantial.

There is also a possibility that earner surplus could be underestimated. If many workers would, in reality, struggle to find comparably paying alternative jobs, or find none at all, the actual earner surplus from Uber might be significantly higher. Workers might overestimate their ability to find equivalent employment or earnings outside of Uber. Normally, in Switzerland's well-functioning labor market, such factors might not play a dominant role. However, given the unique nature of platform-based self-employment, these factors could weigh more heavily in this sector than in others.[17]

Conversely, it's possible that the consumer surplus might be overestimated in the long term. While customers may face challenges in replacing the platform service immediately, they could find suitable alternatives over time, which would reduce their surplus value associated with Uber.

As mentioned in the introduction, uncertainty in the analysis of economic surplus is unavoidable, not least due to the self-reported survey data.

[17] The results of the study on effects of the Genevan reclassification of couriers (engagement of the earners by compulsory third-party fleet operator, instead of direct work of the earners through the platform) suggests it may indeed be difficult for a large proportion of earners to find a suitable alternative to driving on the Uber platform, see Elworthy & Stein (2021).

4 Economic Gross Value Added (GVA)

GVA associated with the activities of Uber is estimated. GVA is an expression of the relevance Uber has for the concerned economic agents (workers and firms in direct or indirect exchange with Uber and its services). While it could not be said that the GDP would shrink 1:1 if this GVA from Uber activity would not exist, (i) the large values observed, (ii) the high share of incrementality (as opposed to substitution) of spending within the catering sector (Eats) and within the transport sector (Rides) (see 3.2.1), as well as the (iii) high surplus generated for customers and earners (3.2.3), suggest large positive effects for multiple specific sectors. Nevertheless, GVA analysis cannot be conflated with a macroeconomic general equilibrium analysis of economic effects on the long-term labor market and GDP. The latter depend on many factors whose in-depth analysis would have been well beyond the scope of the present study.

4.1 System limits

The system analyzed includes the earnings on the Uber platform in Switzerland and domestic expenditure of workers, including workers' costs of doing business as well as private spending, *after* deduction of the platform fee. That is, in terms of GVA, the focus is strictly on the associated effect of the Uber driver activities on specific sectoral economic activities. Earning and spending of Uber as a company with its (office) employees, is excluded from the study, and the induced economic effect of expenditure assumed to take place abroad is excluded too.

4.2 Calculation background

4.2.1 Direct Effects

First and foremost, GVA for Uber includes the direct income of the workers on the Uber platform, after subtracting the cost of doing business (i.e. costs e.g. for vehicles and licenses).[18]

In addition, it includes taxes directly delivered to the state, which includes here the VAT for those earners who are assumed to be subject to paying VAT.

Social security contributions are part of the income counted as GVA. They do not mostly represent a 'cost of doing business' or an 'intermediate input' to be subtracted. Rather, they represent a deferred consumption possibility mostly for the worker herself (for example after pension or once she'd become unemployed).

4.2.2 Indirect Effects

Indirect effects are GVA created via the activity of Uber services as demand in third-party companies. The spending from the Uber services activity leads to turnover in the corresponding firms and, using industry-specific statistics where available, we calculate the amount of gross value-added this turnover implies in the corresponding companies' turnover.

[18] Colloquially one might talk about the 'wages', but of the mostly self-employed workers on the platform.

4.2.2.1 Vehicles, license, insurance

As part of the costs of doing business, vehicle costs (most importantly for cars), fixed and variable, as well as related costs such as driver-licensing and insurance, are subtracted from the direct GVA: These are costs of doing business for the earners and therefore must be subtracted from any sort of disposable income otherwise generated (to only count value added).

However, these direct costs lead to indirect economic effects: value-added for the businesses involved in providing the goods and services required for the activity on the Uber platforms (car purchase, licensing efforts, insurance, maintenance).

Vehicle investment: Treated as Cost (net view)

Just like the *Gross* Domestic Product (GDP), the *Gross* Value Added (GVA) theoretically does not subtract the cost for depreciating capital, while *Net* Value Added does subtract it.

With a slight departure from the theoretical concept of GVA, we here calculate a GVA figure from which the car expenditure (depreciation) costs have been subtracted. This choice was made because it more directly reflects the economically relevant generated value (value added) in the sector.

In other words, we here take on a certain type of *net view* on the GVA associated with Uber. We stick to the name gross value added despite this, to avoid any potential confusion with any analysis where 'net' could be interpreted as having subtracted systematically all substitution effects, which would be very difficult to achieve precisely (although we do subtract a major substitution effect in restaurants, see next section). Indirect value added corresponding to effects of the investments for cars is, however, included as a positive contributor to GVA in the calculation.

4.2.2.2 Caterers

For Uber Eats, a dominant share of the value added is associated with the (money spent on the) food ordered from the caterers, i.e. restaurants and takeaways. These cooked food orders themselves would represent a very large impact of Uber on the catering sector, if all the money spent via Uber would otherwise not have been spent on similar products. However, significantly more than for other Uber Rides, a high share of clients would have enjoyed comparable services, i.e. comparable types of foods, namely as dining-in or self-collected take-out, or even – more rarely – as food delivered by the restaurant itself (see split of alternatives for Uber Eats clients in 5.3).

Given that food delivery services have appeared in relatively similar periods across the country, and have grown in a period with many other socio-economic changes, such as the pandemic, the rise of the internet and online search and ordering in general, as well as the changing work, living, and commuting conditions due to the rise of home-office as well as the gig-economy, it is not simple to reliably estimate, based purely on public national data, the share of Uber food deliveries that can be considered as truly 'additional' catering service purchases compared to a counterfactual with no online food delivery platforms such as Uber Eats.

In this study, we therefore rely on self-reports by the Uber Eats clients as to what types of meals their orders replace (see 5.3).

The survey results indicate 49% of the food orders replaced a food purchase from a caterer, while 51% of the orders did not replace any such food order. We therefore account for 51% of the spending for foods from restaurants on Uber Eats as incremental spending within the catering sector. Implicitly, the underlying assumption is that for every 1 CHF paid via the platform for the food itself (excluding the platform/delivery fees), the catering service sector (restaurants, take-aways, etc.) economic size increases by 0.51 CHF, the other 0.49 CHF being money that might have been spent on the sector's services even in the absence of the digital demand and supply matching platform(s). The considered value share of 51% seems to be a

realistic value, and somewhat conservative, when thinking of the entire delivery sector as a whole and when comparing to international data:

1. The clients were surveyed on alternatives specifically to the *Uber* platform; if instead asked for alternatives to food delivery services overall, a higher share of alternative meals would have likely come from the non-catering sector, given the Uber answers include the convenient shift from Uber to other platforms.
2. The two alternative estimates from the literature on the topic that we are aware of indicate a significantly higher incremental share, partly because the deliveries are also of higher value than the alternative catering transactions:
    a. alphabeta 2020, reporting an incremental share of 70% for spending on food delivery, based on a detailed big-data study of anonymized bank transactions, with a good half of food transactions being additional while also being higher in size, for Australia.
    b. Wells Fargo 2019 US survey results indicating, for restaurant food orders, 67% to have replaced home-cooking, 19% to have replaced an in-person restaurant visit, and 13% replacing take-out orders from a restaurant.

The value-added share of restaurants is estimated to be 46%, based on sectoral intermediate input shares from Federal Statistics Office (FSO) National Accounts (BFS Volkswirtschaftliche Gesamtrechnung).[19]

4.2.3 Induced Effects

Induced effects correspond to the direct GVA generated by the spending of income of drivers and couriers in other companies. It depends on the disposable income spent and on the share of gross value added in the corresponding companies' turnover (100% minus the intermediate input share). Earning and spending of Uber as a company with its (office) employees, and all the indirect effects associated with these, are excluded from the study.

4.3 Results

4.3.1 Total GVA estimate & Overview

The following figure shows the total GVA estimated, of 297 million CHF/y, from Uber Rides and Uber Eats together. Uber Rides dominates with a GVA of 167 million CHF/y, compared to 129 million CHF/y from Uber Eats.

Some of the most interesting observations, besides the total GVA of around 300 million CHF/y:

1. As in the case of the Surplus estimate above, the aggregate Eats value for GVA is smaller than for Rides. However, Eats and Rides are much closer in the case of GVA, than in the case of the Surplus, calculated further above. Two elements help explain this:
    a. The large positive effect of Eats on restaurant revenue leads to a major extra GVA component for which there is no quantitatively comparable element in Rides.
    b. The particularly large *client surplus* estimated for Rides clients is not directly expressed in the gross value added, and therefore in GVA estimate of Rides does not have any comparably large extra value in comparison to Eats. This

[19] This value is likely to be conservative. It is based on the sectoral value for gastronomy, which can be expected to include areas with somewhat higher intermediate input shares than basic restaurant and take-away businesses.

highlights how GVA provides only an incomplete picture of the welfare impact of a given industry or service: it expresses elements related to turnover or, more precisely, to sales values net of intermediate inputs in particular industries, but it does not directly capture if customers (or workers) involved derive particularly high personal satisfaction from their relationship with the industry studied. In the present case, in particular for Uber Rides, the statistics suggest, customers might derive particularly much benefit from being able to use Uber.

2. More than half of the value added in the sector is direct value added. This means the earners on the Uber platform capture, as earnings, a very large share of the total domestic value added created through the platform. Naturally (in particular in a country with Swiss salaries), in a business of transporting individual persons or meal orders, the earnings of the driver correspond to the largest share of the total cost.
3. Vehicle-related value added is a very small share of the total. This can partly be explained by most earners using their private car for work, which limits the investment-related vehicle costs attributable to Uber, even though the investments for switching to more expensive cars due to the use for work have been considered. In addition, hourly mileage during work is not high, limiting operating expenditures (Opex). Finally, on the Eats side, vehicle costs are particularly small, given couriers rarely use cars but instead mostly bikes or even bicycles.

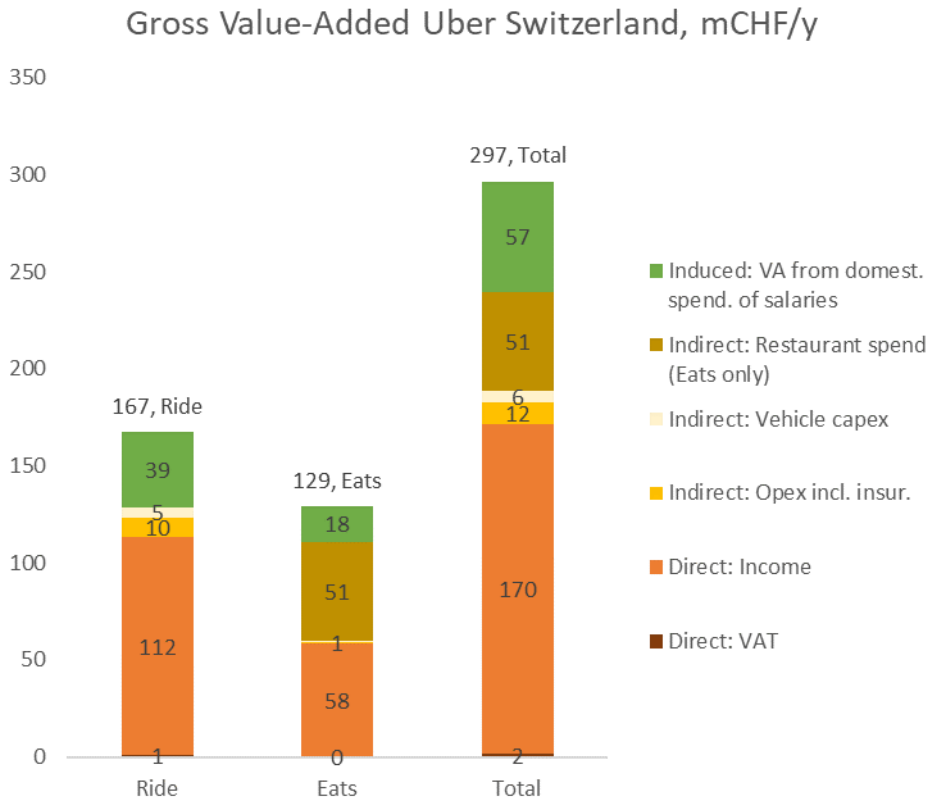
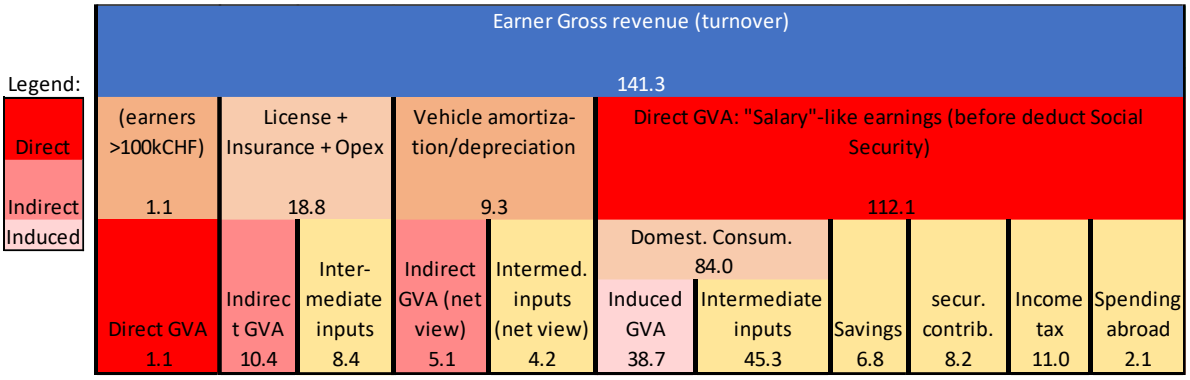


Figure 12 Gross Value-Added Uber Switzerland

The following diagrams illustrate the major economic flows from which the sectoral GVA values are derived, first for Rides and then for Eats.

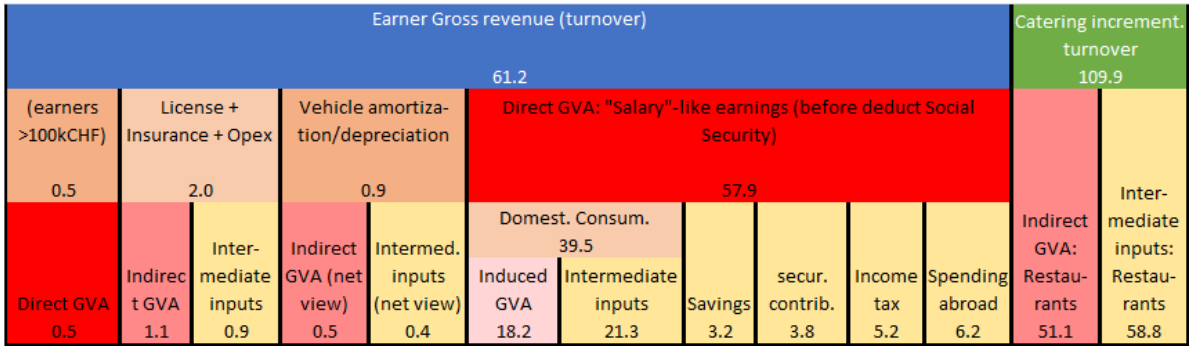
Rides



Values in million CHF/year. From top to the bottom, individual elements are split into subelements.

Figure 13 GVA-Diagram, Rides

Eats



Values in million CHF/year. From top to the bottom, individual elements are split into subelements.

Figure 14 GVA-Diagram, Eats

4.3.2 Job equivalents

Full-time job equivalents (FTE) are calculated using the working hours of earners on the Uber platform, and, for indirect and induced GVA, the relevant industries' labor productivities according to FSO data for 2019 (FSO 2023),[20] Providing the value added per worker (in FTE) employed in the sector.

Observations include:

1. There is a full-time equivalent of around 5500 workers whose specific job depends quite directly on the activities on the Uber platform, of which more from Uber Rides and a bit less than 2500 from Uber Eats.
2. Relative orders of magnitudes of values roughly match patterns observed above for GVA, which is not surprising, given the often-close correspondence between GVA and jobs.
3. Nonetheless, the share of Uber earners and Gastronomy is particularly large in the job accounts; in the GVA accounts the other impacted sectors had a somewhat higher share. One explanation for this is that in particular in the driving sector (both, Rides and Eats), there are particularly many jobs (FTE) created for any given amount of

[20] At the time of writing, data is available until year 2021, but gastronomy labor productivity is strongly biased downwards (in kCHF/FTE, the statistic shows 2018: 65, 2019: 66, 2020: 60, 2021: 49), presumably due to lagged statistical repercussions of covid, which if used would artificially inflate the calculated job equivalents.

turnover, or of GVA, directly created in the sector. To some degree this applies also to the Gastronomy sector.

The 5540 FTEs correspond to more than 0.1% of Switzerland's entire workforce of 4.4 million FTE workers (according to FSO, for 2023): More than 1 in every 1000 jobs.

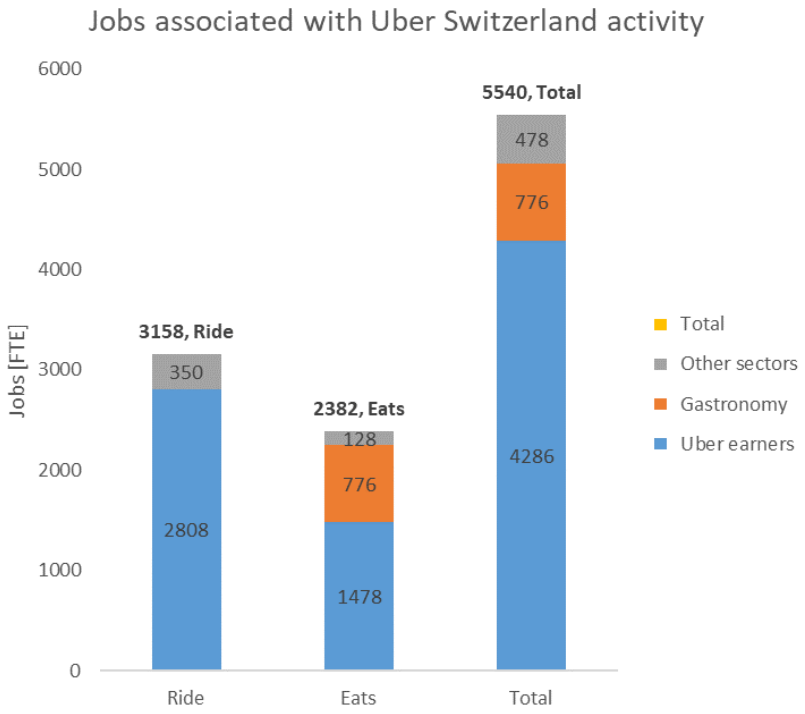


Figure 15 Job associated with Uber activity in Switzerland

4.4 Conclusion

The overall GVA associated, directly and indirectly, with the activities of Uber has been estimated, as an expression of the relevance of Uber for the concerned economic sectors and agents (workers and firms in direct or indirect exchange with Uber and its services). The GVA value found is large, 297 million CHF annually, and corresponds to an estimated value of 5540 full-time jobs, more than 1 in every 1000 jobs in Switzerland. In the specific sectors considered, it can be expected that the largest share of these values correspond to incremental impacts of the Uber business model (or of the ride-hailing and delivery platforms generally), notably as the most significant expectable sectoral substitution effect has been subtracted: only the estimated *incremental* share of restaurant (and take-away) food spending from the delivery orders has been included in the value added considered; the expectable amounts spent on food deliveries that would have happened "anyway", without Uber, have been netted off from the gross value added and job estimates.

Importantly, there are various further expectable, but difficult to quantify, substitution effects that mean that it could neither be said that the country's entire GDP would shrink exactly in proportion to the reported GVA if Uber (or similar matching platforms) didn't exist, nor that the unemployment would rise 1:1 by the estimated number of jobs. For example, in an open economy, any specific job created might, in the long run, be at least partly offset by higher equilibrium wages and therefore a lower macroeconomic labor demand in the country overall, or even by the attraction of incoming workers from outside of the country's border. Naturally,

for an individual platform like Uber, such indirect effects will never be very large in absolute terms, but they can take on relevant proportions in comparison to the size of the economic activities of Uber in Switzerland.

However, it can be deemed likely that a significant share of the concerned economic agents (firms and workers) has benefitted to a substantial degree of the presence of Uber's matching services, and that they would feel a corresponding negative impact if the services were not provided. The presence of non-zero-sum positive economic surplus created by the service, as estimated in the Section 3, emphasizes the presence of positive effects from the service.

Large positive effects are also implied for economic sectors overall for which the Uber platform has become important, even after within-sector substitution effects are netted off. This is most directly observable in the catering sector. For example, the results from the survey conducted among Swiss consumers, as well as international experience, suggests that 50% or more of the orders of foods on Uber Eats seem to correspond to net additional demand from caterers: a large share of clients report to otherwise have been cooking these meals at home if the delivery option had not been available; international evidence suggests the ordering value of the additional orders might even be higher than the value of the substituted catering revenues.[21] In a similar vein, only a minor share (20%) of Uber Rides trips would have been taken in a taxi in the absence of Uber (many others would have used a different mode of transport, or not taken the trip, see further below), so that the a major share of the gross value added as calculated in this study almost surely corresponds to a 'net-of-substitution' value added in the (private) passenger transport sector.

Moreover, one presumably large economic effect has at best been accounted for to a limited extent in the present study's consumer surplus estimates: Getting around conveniently thanks to an international digital platform is making Switzerland attractive to many modern visitors, for both leisure and business (as well as potentially for modern expats as good taxpayers).

Despite these various positive effects for specific sectors involved, and the likely significant positive welfare effect for consumers, it is important to see that GVA analysis cannot be conflated with a macroeconomic general equilibrium analysis of economic effects on the long-term labor market and GDP. The latter depend on many more factors that could not be analyzed in sufficient detail to provide precise answers.

Beyond job numbers

Taking a step back from the exact numbers estimated and tangible effects discussed here, i.e., going beyond the various quantified and unquantified macroeconomic effects, from a labor market perspective it seems at least as important to consider not just how many people find work directly and indirectly associated with Uber, but instead *what types of jobs* exist thanks to the business model. The very low entrance barriers for workers are by far the most salient feature of Uber's special business model. For the jobs of Uber earners themselves, not only are there barely any specific qualifications required (beyond what is legally required for e.g. the license to drive/drive persons), but there are also no required fixed working periods. This has not been the central aspect of the study, but survey answers have, more strongly than we expected, underlined the role of both, the low barriers to begin the job and the full freedom to select when and how much to work. This combination may not be essential for the majority of all workers in the labor market, but it apparently is of a high value for a significant subpopulation. With the digital platform, this population finds a relatively unique earnings opportunity either as main work or as a side-job, either full-time or 'very' part-time, and either during usual working hours or during nighttime and weekend periods. These characteristics can be particularly attractive for workers who might otherwise struggle to find or to execute a decent, regular job, and for workers with an additional job but in precarious financial situation. With that, the platform can be attractive to various types of marginalized persons. That said,

[21] alphabeta 2020 find 70% incremental food purchase volume from caterers, with a good of orders being additional and their value being higher-than-average spend.

our survey has not in depth explored the degree to which Uber platform earners are in a situation of economic hardship or would be without the ability to work on Uber.

5 Miscellaneous

This section deals with a variety of broader socioeconomic aspects focusing on the mobility benefits for customers using Uber, aspects of Uber earners not yet mentioned in previous analyses, as well as environmental impacts. Most data reported derives directly from the survey results, weighted for Uber usage and answer probabilities (see weighting discussions above). For some elements, the interpretation is limited by the unavailability of demographic and locational data about the trips.

5.1 Mobility benefits for Uber riders

Customers in Switzerland mainly replace bus and tramway rides (39%) as well as taxi rides with Uber (32%), to a lesser extent also train or boat rides (17%). By choosing Uber, customers decrease their travel time on average by more than 50%, from 52 to 23 minutes. In addition, a slight majority of 55% uses Uber by night, defined as the time between 8 p.m. and 6 a.m. This supports the common interpretation that Uber substitutes public transport, whenever there's no transit running (i.e. nighttime) or when the connection is highly inefficient compared to an Uber trip.

24:00 – 06:00	06:00 – 20:00	20:00 – 24:00
		
29%	45%	26%

In line with the rhythm of night live, overall, the most popular time to ride Uber is at night during the weekend:

	Week (Monday – Thursday)	Weekend (Friday – Sunday)
Daytime (06:00 – 20:00)	33%	12%
Nighttime (20:00 – 06:00)	20%	35%

A particular mobility benefit for customers seems to be safety. The vast majority of Uber riders in Switzerland are very satisfied (64%) or rather satisfied (31%) with the security of using Uber.

Evidence suggests a potentially large benefits of Uber for the nighttime economy, which has not specifically been accounted for in the GVA analysis above: Up to around half of the nighttime trips with Uber would have not been taken in the absence of Uber: For 39% of nighttime trips, answers indicated they would have not taken place without Uber; for another 14%, respondents didn’t know whether they would have taken the trip in the absence of Uber:

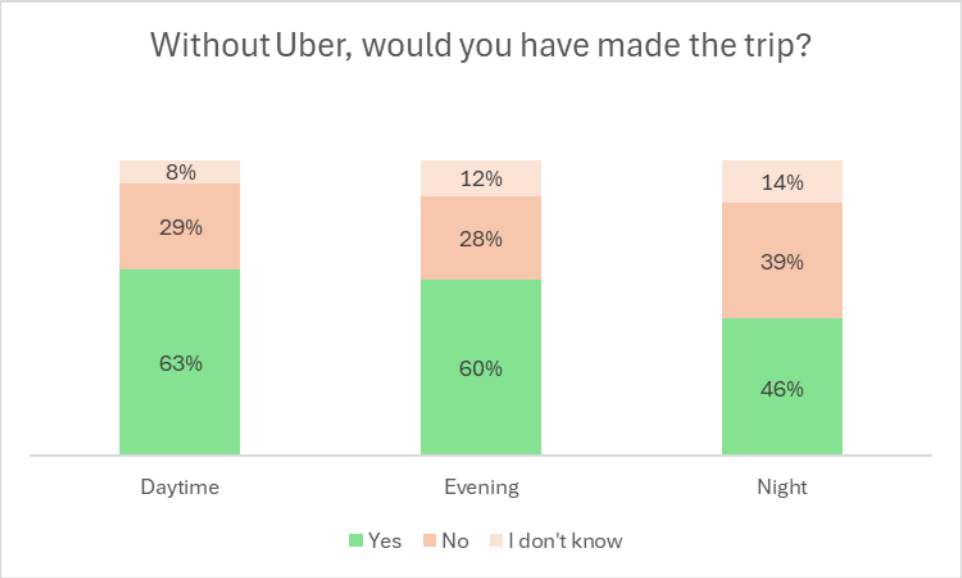
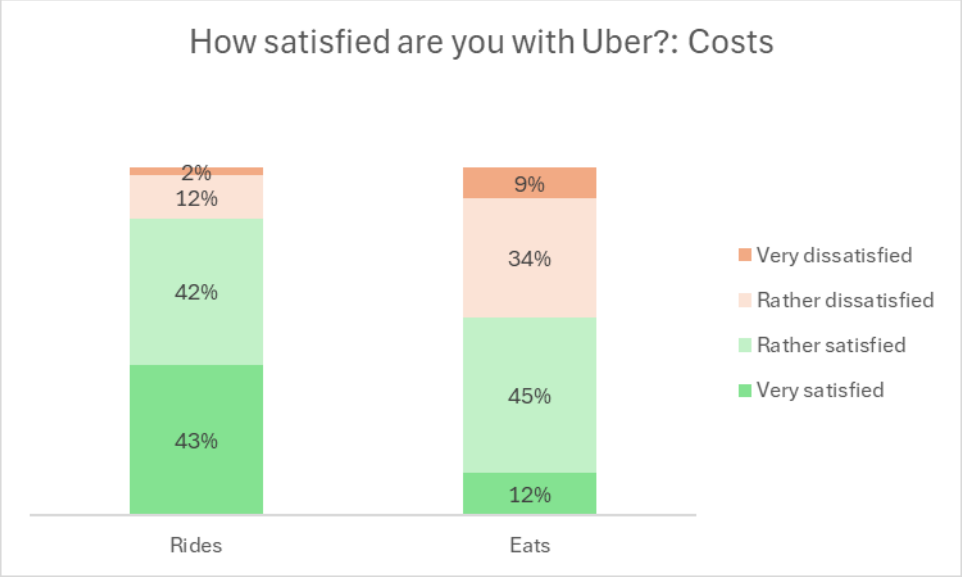
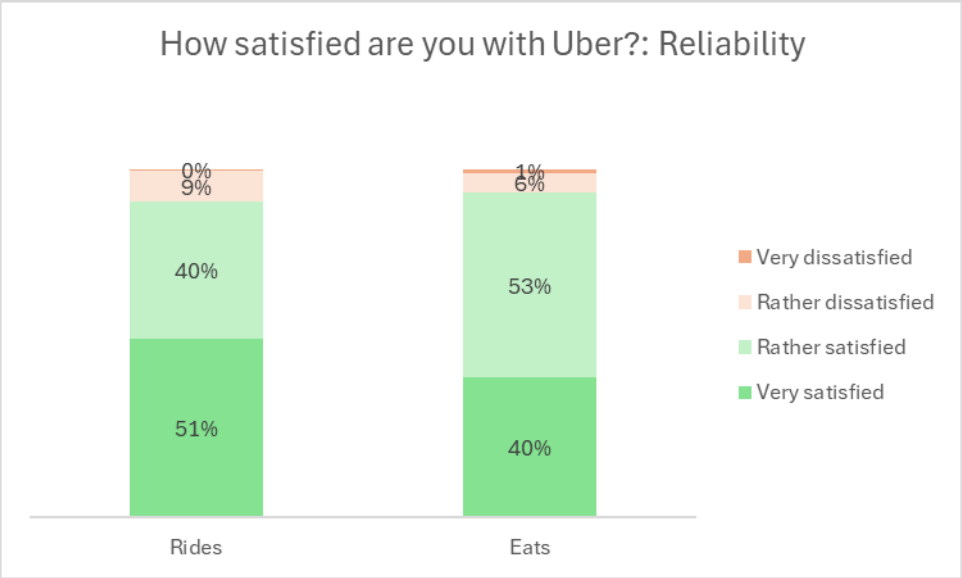
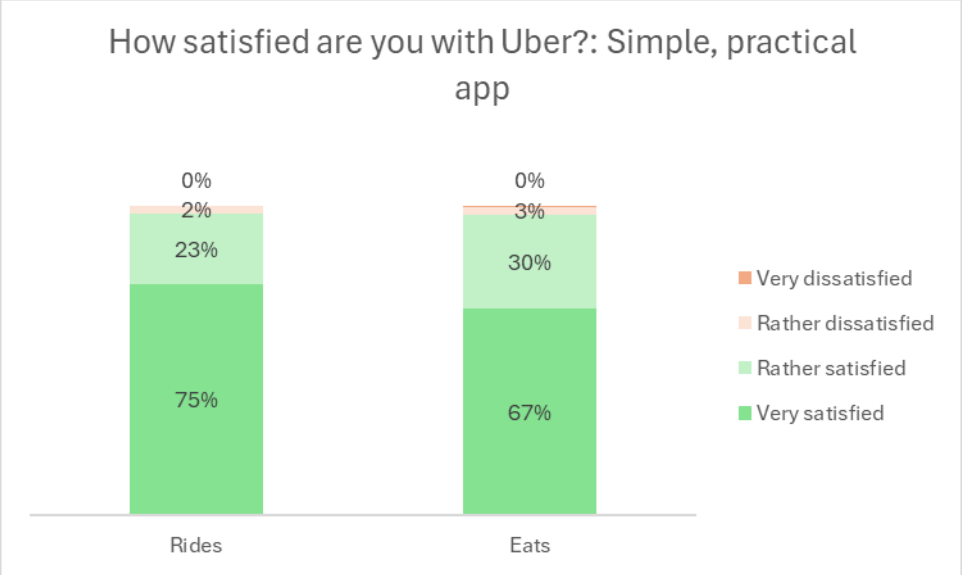


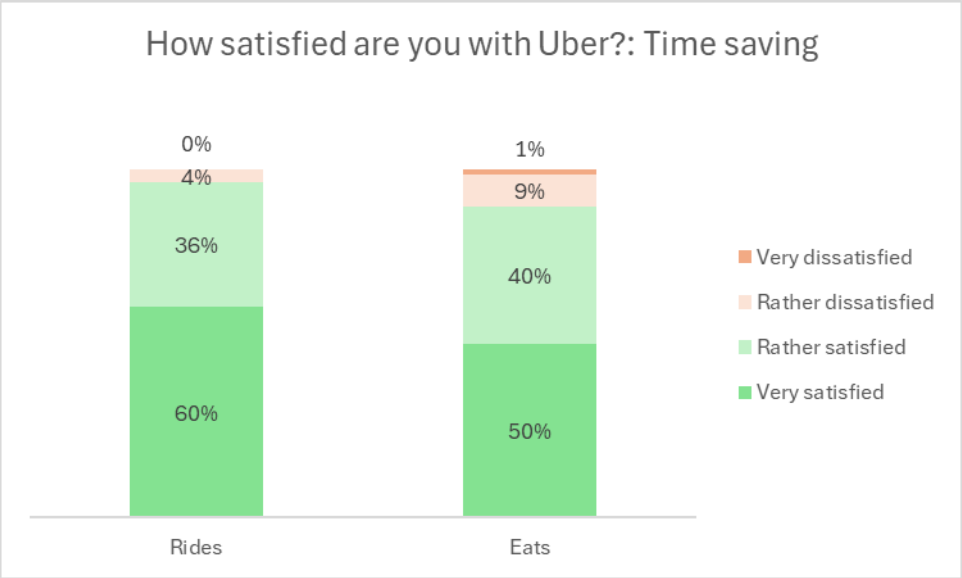
Figure 16: Trips (not) taken in a hypothetical absence of Uber

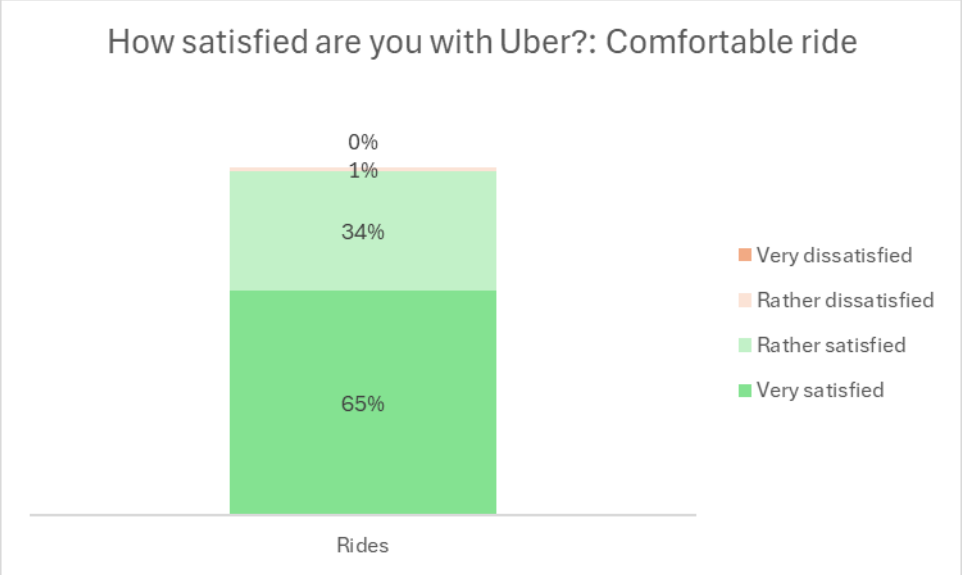
Customer satisfaction tends to be very high, with regard to a rather wide range of dimensions surveyed, plausibly helping to explain the very high positive consumer surplus estimated further above. One exception is the costs for Uber Eats, rated positively by only around 60% of customers. The following graphs illustrate the results. In many cases more than 50% of customers are very satisfied with Uber, and in many cases more than 90% are at least rather satisfied. Eats scores (slightly) less good on costs and cost transparency, as well as on time savings. An overwhelming share of 99% are at least rather satisfied with Uber as providing comfortable rides, and 97-98% of all Uber customers are at least rather satisfied with the simplicity of the app; more than 90% are at least rather satisfied with reliability. Figure 17 illustrates these plus additional data.




How satisfied are you with Uber?: Reliability
0%
9%
40%
51%
1%
6%
53%
40%
Rides
Eats
Very dissatisfied
Rather dissatisfied
Rather satisfied
Very satisfied


How satisfied are you with Uber?: Simple, practical app
0%
2%
23%
75%
0%
3%
30%
67%
Rides
Eats
Very dissatisfied
Rather dissatisfied
Rather satisfied
Very satisfied


How satisfied are you with Uber?: Time saving
0%
4%
36%
60%
1%
9%
40%
50%
Very dissatisfied
Rather dissatisfied
Rather satisfied
Very satisfied
Rides
Eats


How satisfied are you with Uber?: Comfortable ride
0%
1%
34%
65%
Very dissatisfied
Rather dissatisfied
Rather satisfied
Very satisfied
Rides

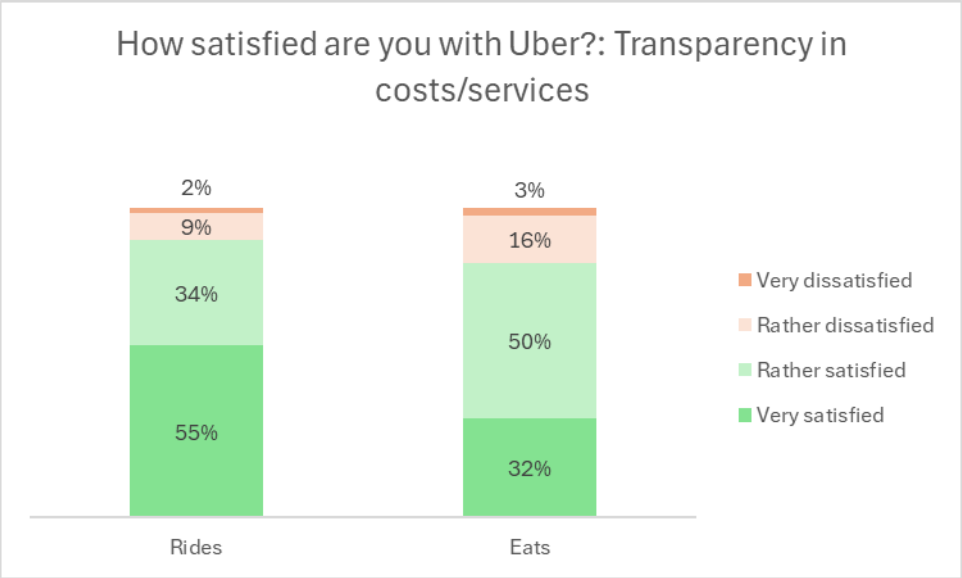


Figure 17: Customer satisfaction along 6 dimensions

5.2 Employment benefits for Uber earners

The job as an Uber driver or courier can be carried out by a large range of people as it has comparatively low qualification requirements (Hall & Krueger, 2018). Uber earners feel that the job matches their skills and abilities well, with practically no difference between Rides and Eats, see Figure 18 below.

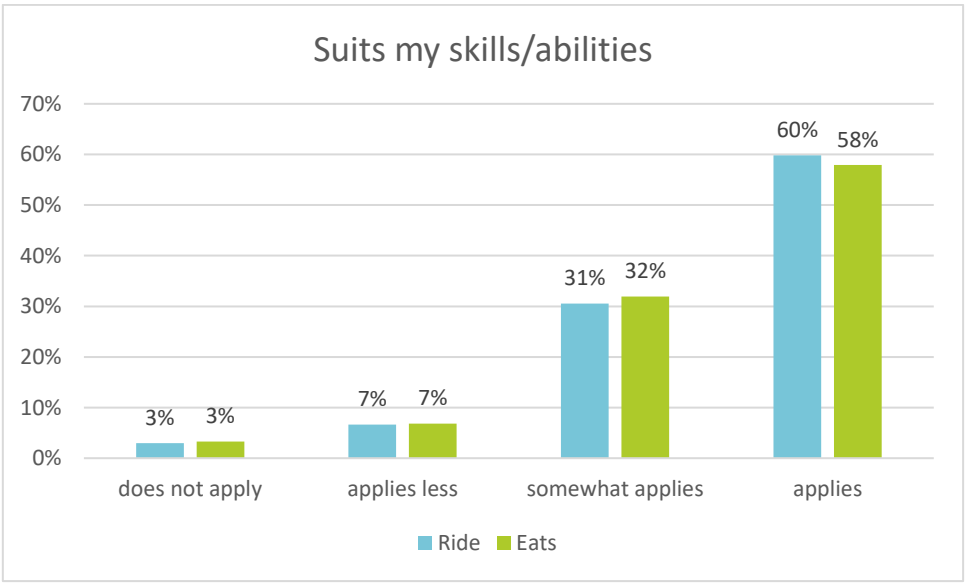


Figure 18: Why did you join Uber? Answers for the option: suits my skills/abilities

The lower qualification requirements offer people an easily accessible earning opportunity. Earners describe that working on Uber was the first best occupation they could find within a reasonable period of time. This applies in particular to Uber Eats earners (Figure 19), for whom indeed the barriers to entry are lower than for Rides, as Eats requires no qualification for professional transport of persons.

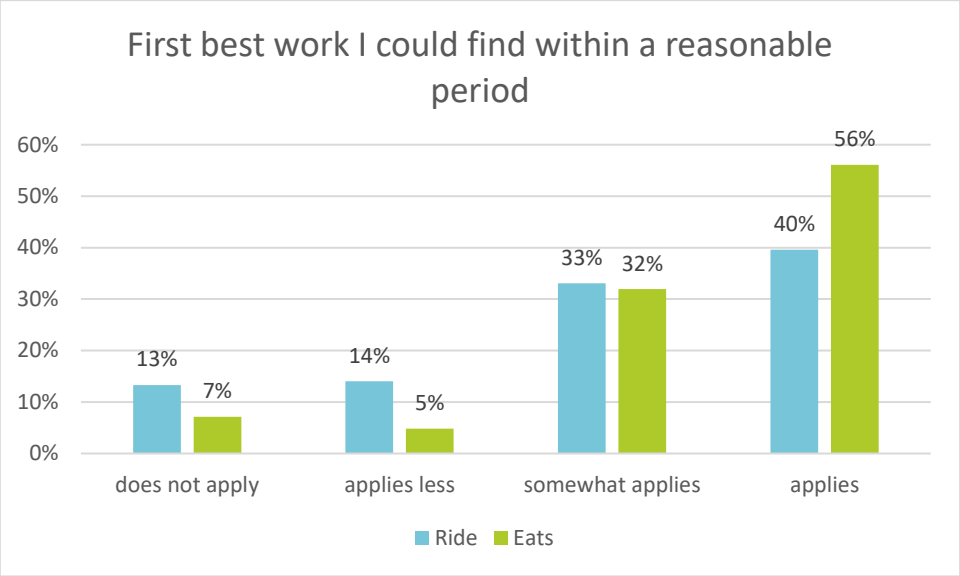


Figure 19: Why did you join Uber? Answers for the option: first best work I could find within a reasonable timeframe

The comparatively high flexibility (see section 3.1) and low qualification requirements mean that Uber gives people a low-threshold income opportunity. The flexibility enables people to earn an income despite other obligations or choices in life. Other studies have shown that Uber drivers value their flexibility very high as it can be difficult to find in other forms of work (Chen et al., 2019).

In our study, the compatibility with their lifestyle is the most important flexibility value for drivers as well as couriers, as shown in Figure 20. For couriers, other important aspects are compatibility with family/care responsibilities and with other professional activities/studies. For drivers, important aspects are the compatibility with family/care responsibilities as well, followed by other reasons. These include freedom, choosing one's own work-life balance and having a flexible additional income when needed.

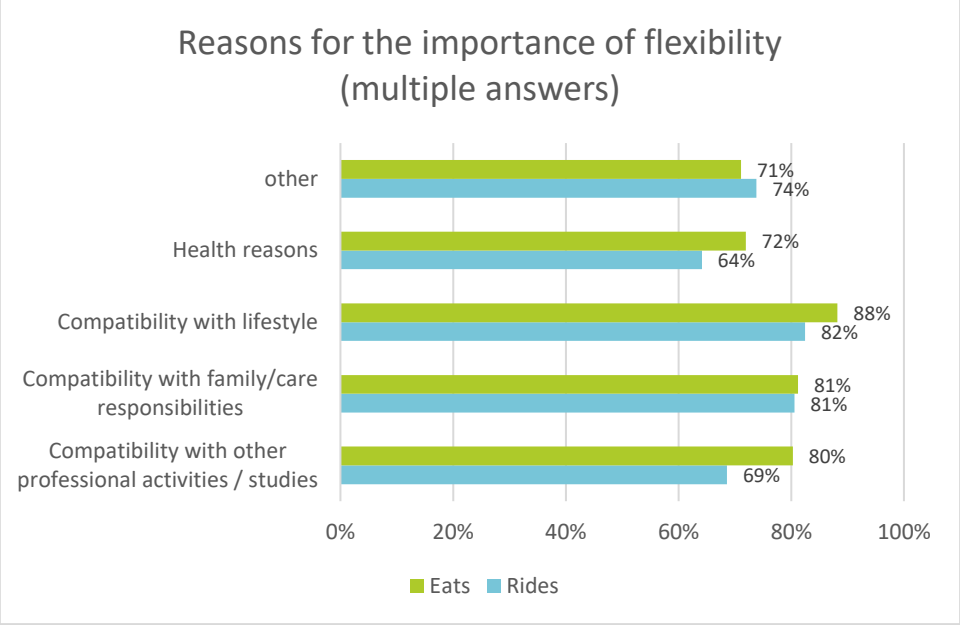


Figure 20: Reasons for the importance of flexibility (multiple answers): share of somewhat applies & applies

Taken together, all these aspects lead to high rates of earners indicating that they enjoy working as a driver or courier (Figure 21).

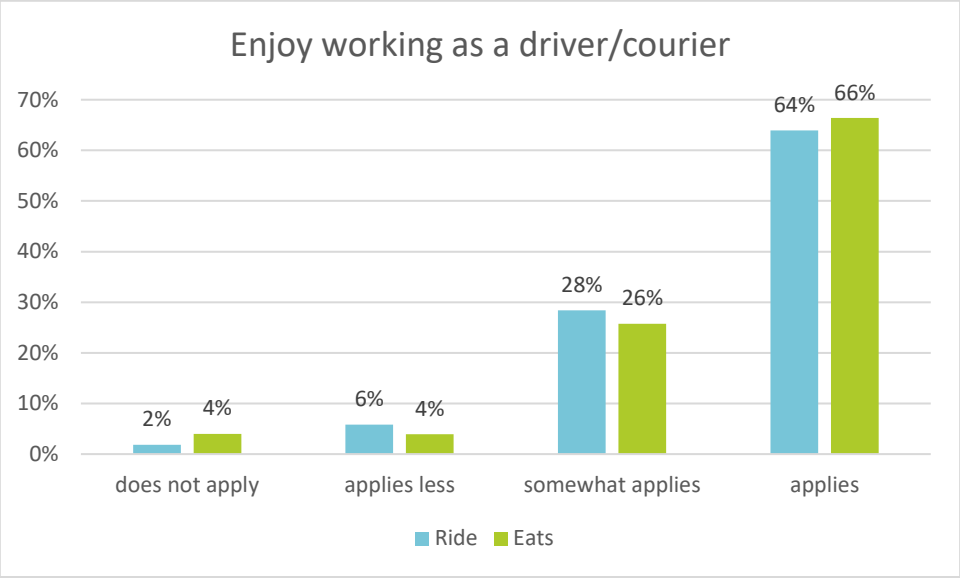


Figure 21: Why did you join Uber? answer option: enjoy working as a driver/courier

When asked about the overall satisfaction with Uber, the share of "very satisfied" is higher among couriers (40% instead of 25% for drivers), although in both cases, 90% or more are at least neutral or satisfied, see Figure 22. On this 5-point scale (1=very dissatisfied to 5=very satisfied), the weighted arithmetic average for drivers is 3.8 and for couriers it is 4.1.

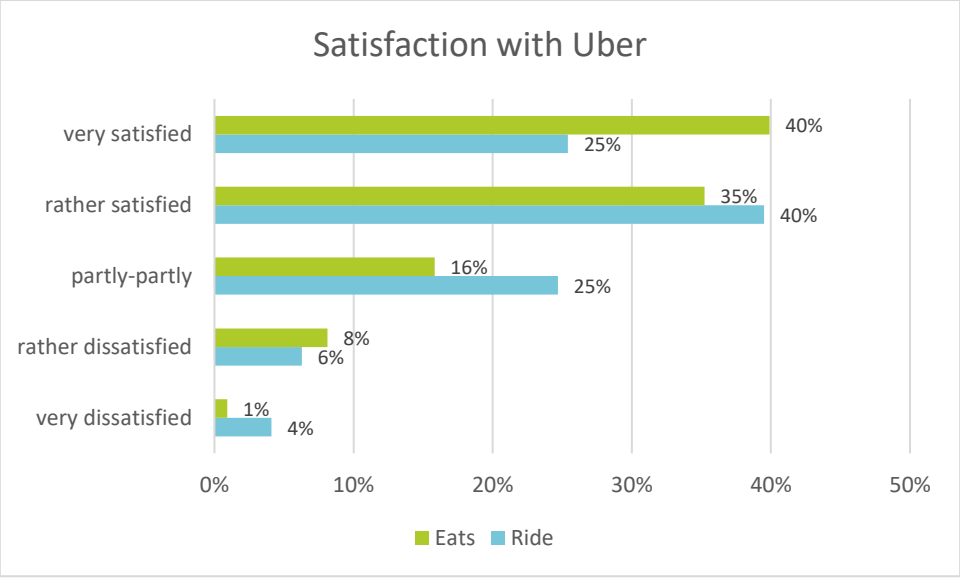


Figure 22: How satisfied are you with Uber overall?

Those 4% of drivers who stated they are overall very dissatisfied with Uber named dissatisfaction with income and dissatisfaction with their activity as the most common reasons. In contrast, the flexibility items (working hours, working volume and place of work) were evaluated better.

5.3 Substitution vs. Additional Value-Added in the Sector

Clients on the platform were surveyed for counterfactual services they'd have used in the absence of Uber. Among other things, this provides valuable insights as to whether the online platform business-model mostly crowds out conventional services or whether instead additional value is created in the main sectors concerned.

5.3.1 Rides: Extra rides or crowding out taxis?

A large share of riders indicate they would not have made the trip without Uber:

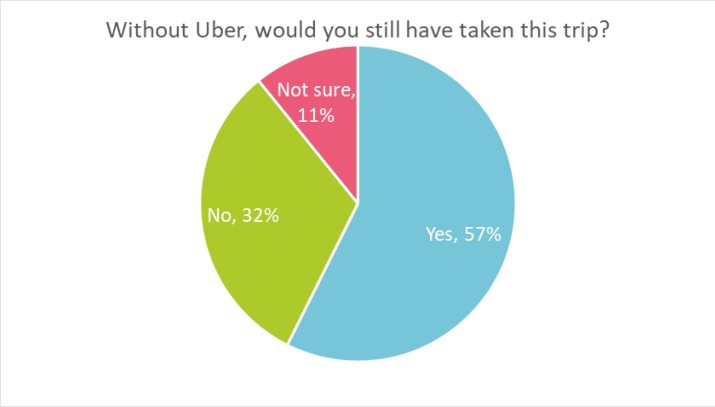


Figure 23 Trips counterfactually taken/not taken

Of those who would have done the trip without Uber, only a third would have used a taxi; most would have used public transport, 56%, and only a few would have used private means of transport or gone by foot. Accounting for the 37% who would have NOT taken the trip without Uber,[22] only **20% of all clients would have taken a taxi instead of Uber**, and 36% would have taken public transport. As mentioned above, the schedule of Uber trips strongly suggests public transport rides are replaced in those instances where Uber offers an alternative to less reliable service (nighttime, potentially with safety concerns; particularly slow connections).

[22] Those indicating "Not sure" were considered 50:50 as having and not having the trip in the hypothetical without Uber.

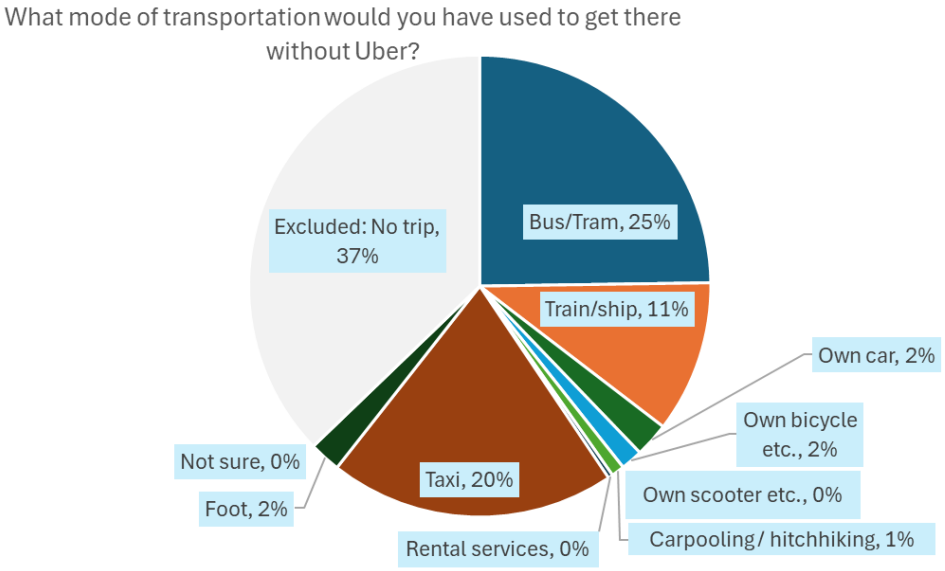


Figure 24 Counterfactual modal split

The time saving relative to next-best alternative modes of transportation are discussed in 3.3.2.

5.3.2 Eats and Catering: Symbiosis or Substitution?

The following figure shows what meals Uber Eats replaces: The types of meal, if any, Eaters would have consumed in the absence of Uber:

- Just below 50% of the meals ordered through Uber would have otherwise been consumed from a caterer. This means a good **half of the meals ordered represent incremental demand for caterers**.
- There is nearly **negligible crowding-out of dining-in** in restaurants: Of those surveyed that eat delivered food, less than 10% of customers would have otherwise eaten in restaurants.

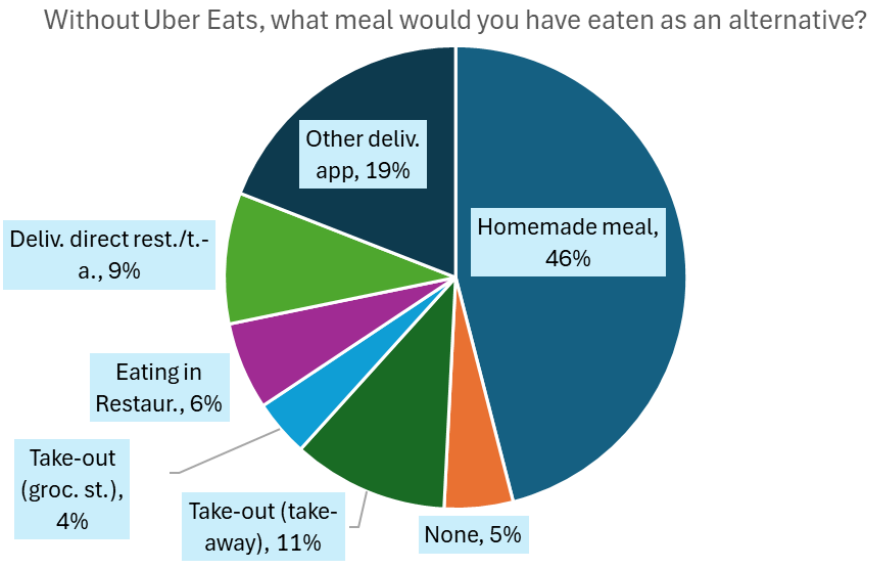
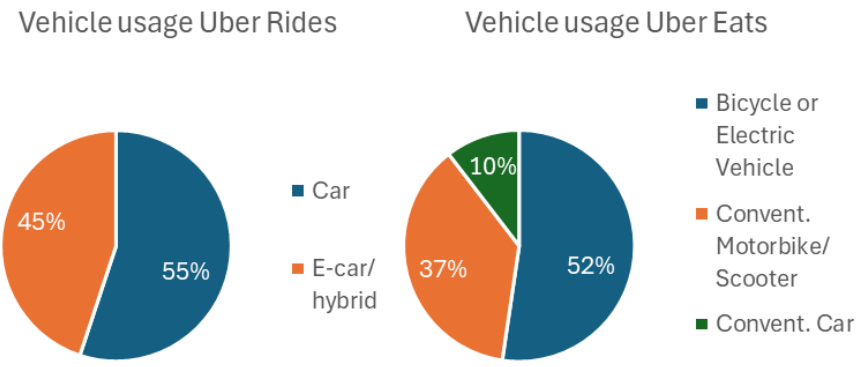


Figure 25 Counterfactual meal types

5.4 Environmental impacts of vehicles

The vehicle types used by Uber Rides in Switzerland are limited to cars, either conventional (55%) or E-cars (plug-in hybrid or fully electric, total 45%). In contrast, couriers use a much wider range of vehicles. Grouping into conventional vehicles and more environmentally friendly vehicles, we see that more than half of Uber deliveries are made with a more environmentally friendly vehicle: 52% with an E-car (plug-in hybrid or fully electric), an E-Scooter or E-Motorbike or a bike (regular or electric), see below. The figure below illustrates these values.



Values weighted by answer probabilities and trip counts.

Figure 26: Which vehicle do you drive during your work for Uber (Eats)?

The share of electric cars is in Uber Rides is much higher than the average share of electric cars (full electric plus hybrid) in Switzerland, which was 11% in 2023 (Swissinfo 2023):

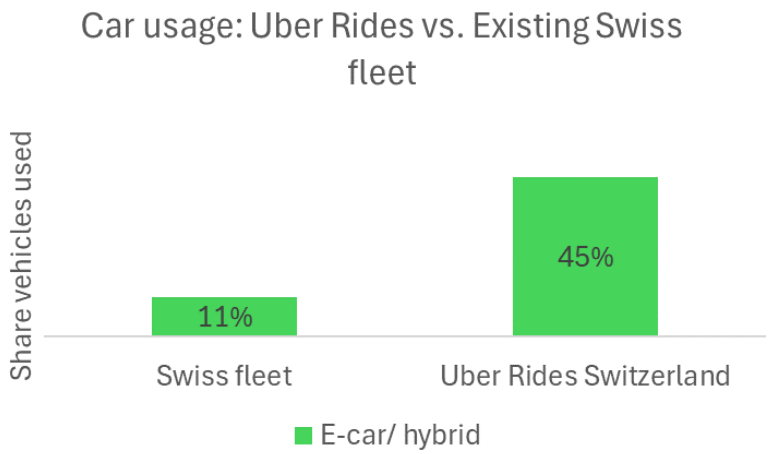


Figure 27: Car usage: Uber Rides vs. existing Swiss fleet

Additional benefits from Uber include the predominant use of private cars of owners which would anyway have held a car.

Despite these positive environmental effects, Ubers potential positive net impact is limited by the roughly one third of riders who indicate they would have used public transport if there had been no Uber (or not ride-hailing opportunity). The calculation of the overall net environmental impact of Uber or of Uber Rides is beyond the scope of the present report. The calculation would be interesting but also complex, in particular if also the relevant public policies, such as the obligation of Swiss fossil fuel importers to compensate increasing shares of emissions from gasoline sales[23] or the equilibrium effects of electricity consumption would be taken into account.

[23] See FOEN Compensation obligation for fuel importers.

6 Literature

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7 Appendix

7.1 Weighting effects for Earner Surplus

As discussed in the main text, theoretically, one might want to weight the different answers, either only based on different types of respondents having different answer probabilities (graph: Weight_p), or additionally multiplied by actual trip counts (graph: Weight_p&trip): assuming trip counts are roughly proportional to earnings, weighting answers by trip counts allows us to infer the total amount of monetary equivalent value of the flexibilities for the workers. The preference curves depend on the weighting choice:

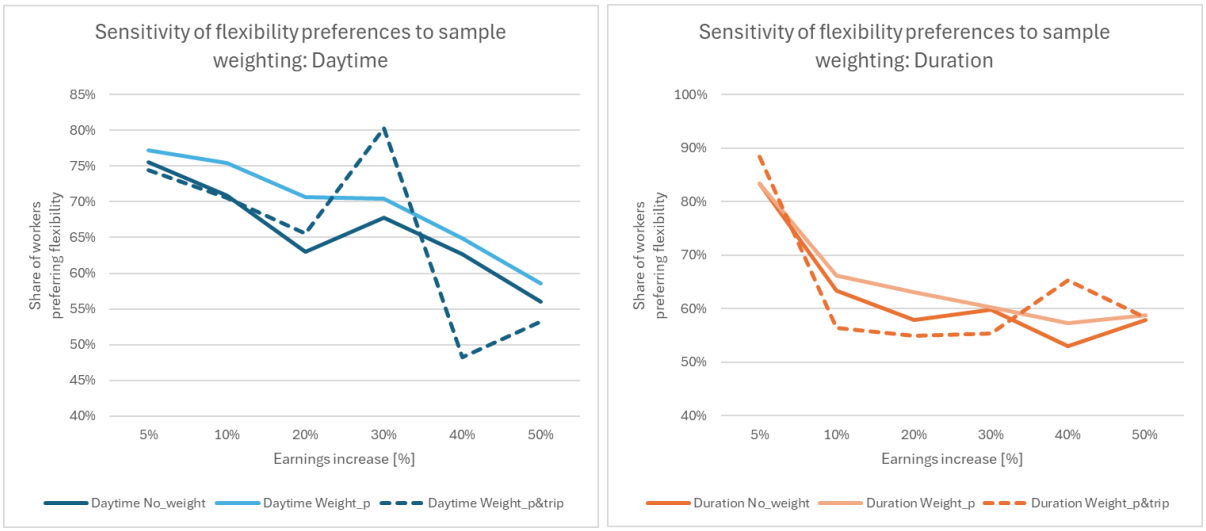

Figure 28 Sensitivity of flexibility to sample weighting

Trip counts have a very large spread between workers, and for a noticeable share of survey answers, trip count data were not available for the study. These two effects conspire to yield particularly noisy curves for the trip-count weighted answers. Nevertheless, as the graphs show, the weighting does not seem to systematically affect the curves.

Moreover, additional calculations have shown that the theoretically ideal weighting (response rates & absolute number of trips), seems to lead to close average values in the graph: It turns out that the overall point estimates for surplus with the unweighted results, and with the fully weighted results (weighting for response probabilities + absolute trip counts) are almost exactly identical.[24]

[24] When only the response rate is used for weighting, the surplus is instead slightly higher.