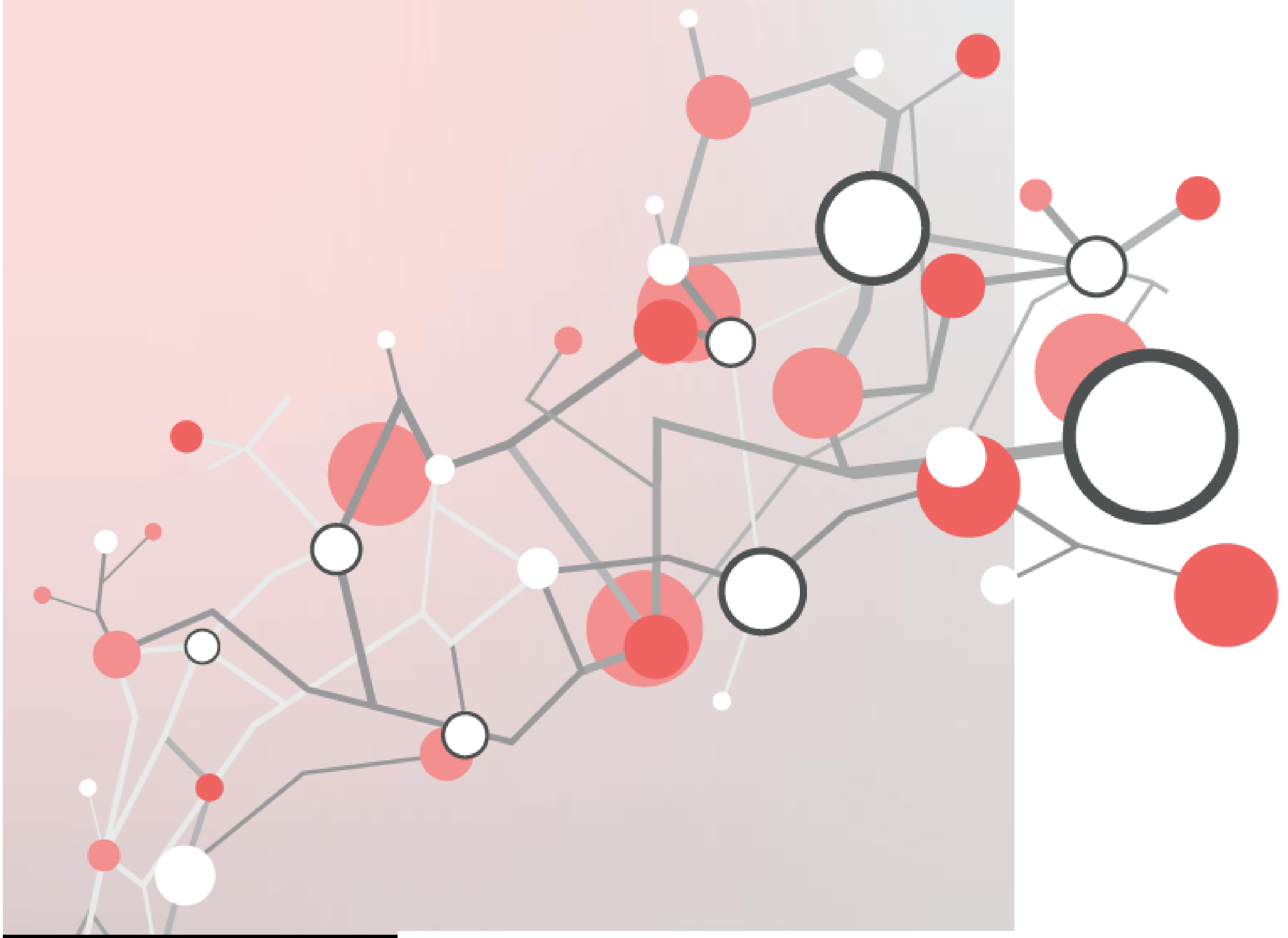
BUSSES & COACHES – GLOBAL MARKET TRENDS

Forecast, Installed Base, Manufacturers

2022

CONTENT



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The market for buses in South & Central America

1 South & Central America (MV)

Bus market in South & Central America

	Installed base	[redacted]	
	Fleet in 2021		↗
	Market for new vehicles		
	Market size in 2021 (units)		
	Average market 2021-2026 units p.a.)		↗
CAGR	Market development (units) 2021-2026 (p.a.)		
	Market size in 2021 (million EUR)		
	Average volume 2021-2026 (million EUR p.a.)		↑
CAGR	Volume development (million EUR) 2021-2026 (p.a.)		

↑ Boom/strong growth ↗ small growth → stagnation ↘ small decrease ↓ clear decline

Figure 1: South & Central America: Market overview

1.1 Market Environment

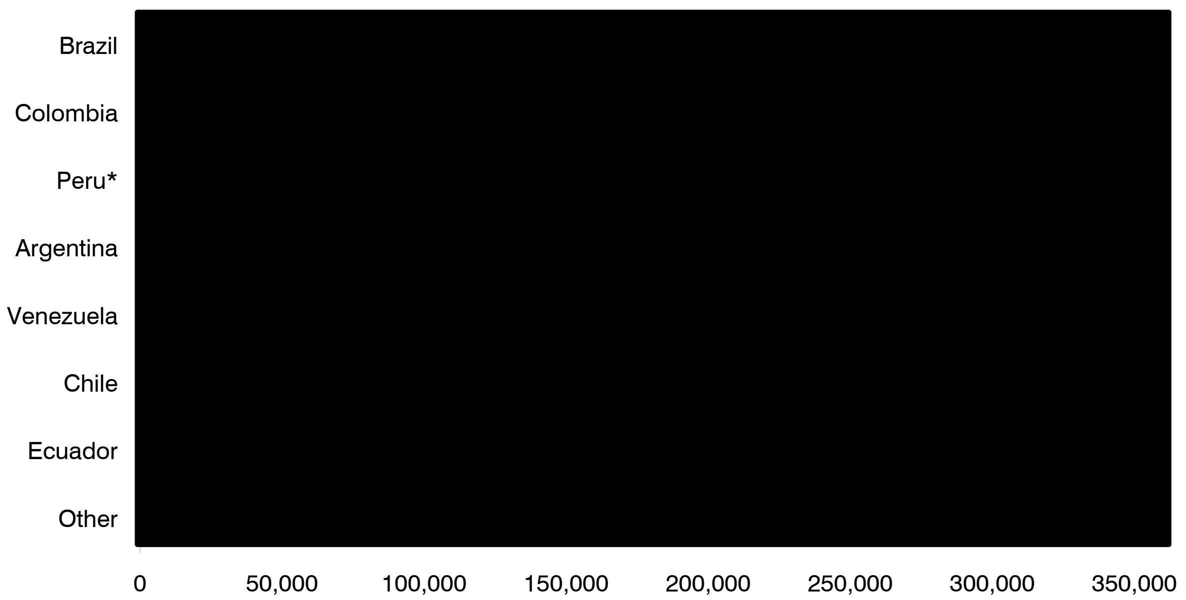
1.1.1 Public Transport Systems and their Operators

In South and Central America, buses are the most common form of public transport, both for short and long-distance travel, as the rail infrastructure is only sparsely established and therefore often does not provide an alternative. In an increasing number of cities, BRT systems have proven to be a good alternative to the established slow and over-crowded mass transit systems of South and Central American cities. Currently, BRTs are operated in around 44 cities in 12 countries of the region. From a global perspective, the region has the highest number and the highest quality of BRT, which transported around 20 million passengers per day prior to the Covid-19 pandemic.

1.1.2 Installed Fleet

The bus fleet in South and Central America consisted of approx. [redacted] buses and coaches in 2021. Brazil alone has [redacted] vehicles, that accounts for 33% of the region’s total.

Fleet per country in South & Central America (in cars, 2021)



Source: National Statistical Offices, Industry Associations © SCI Verkehr

Figure 2: South & Central America: Installed fleet per country

Brazil

The Brazilian bus fleet has increased substantially at an average rate of 2.5% between 2008 and 2018. However, the fleet shrunk by 2.3% between 2016 and 2018 and by 2.9% between 2019 and 2021. The distribution of the fleet is in accordance with that of the population concentration. The state of São Paulo has by far the largest share of the bus fleet, while the next most important states are Minas Gerais, Rio de Janeiro, Paraná and Bahia.

The Brazilian bus fleet is relatively new and can be compared to North American and Western European average ages. Especially in large cities, new regulations have been forcing private operators to invest in new vehicles.

The main transit bus systems in Brazil are SPTrans in São Paulo, Rio Ônibus in Rio de Janeiro, BHTrans in Belo Horizonte and the municipal system in Brasília. JCA Holding, Itapemirim, Grupo Guanabara and Gontijo are among the largest long-distance bus operators.

Colombia

Colombia had a bus fleet of approx. [redacted] buses in 2021, a 6% increase compared to 2018. The bus fleet has been increasing constantly since 2012.

The average age of the Colombian bus fleet is much higher than the fleets of Argentina and Brazil. However, the modern BRT systems of the country are an important exception. Currently, there are seven cities operating BRTs in Colombia: Barranquilla, Bogotá, Bucaramanga, Cali, Cartagena, Medellín and Pereira. These systems operate modern city bus fleets, TransMilenio, the BRT system of Bogotá, for example alone operates more than [redacted] vehicles. Also, Colombia´s fleet consists of around 360 hybrid buses and soon over 1,500 e-buses for which delivery started in 2020. For long-distance services, the main operators are Expreso Bolivariano, Flota Occidental and Expreso Brasilia, operating almost 1,000 coaches.

Argentina

In 2021, Argentina had a fleet of around [redacted] buses and coaches. The bus fleet has remained stable since 2017.

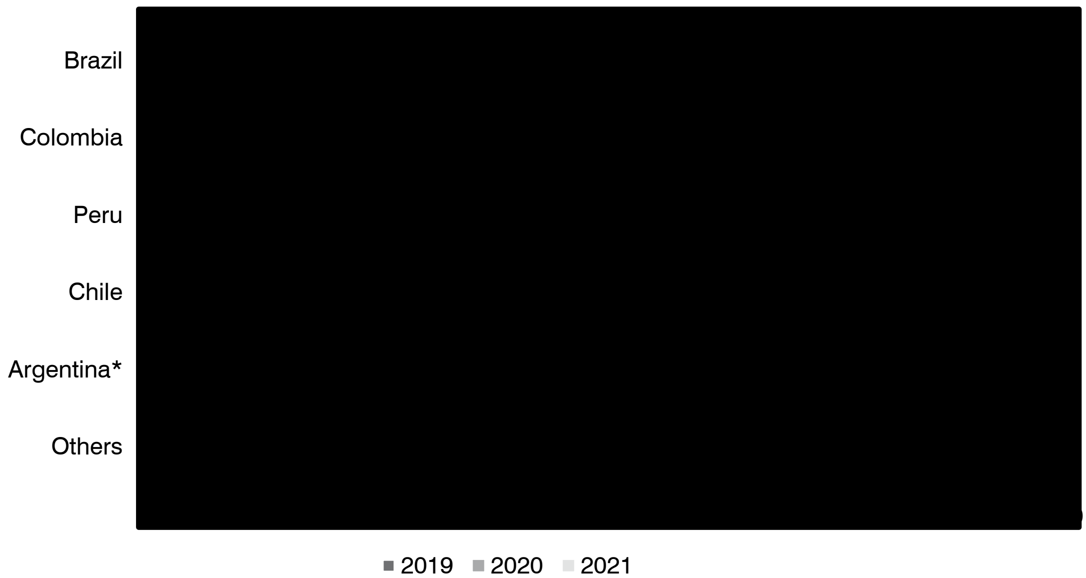
As in Brazil, the bus fleet in Argentina is relatively new. A federal regulation requires city bus operators' fleets to have an average age of less than ten years, which contributes to maintaining the demand for replacements. However, regulations and subsidies for fleet renewals do not include emission and engine type requirements. Therefore, hybrid and electric buses exist only in very limited numbers until now. Delivery of the first 18 electric buses in Argentina was in 2019.

The main markets for city buses are the cities of Buenos Aires, Córdoba and Rosário. Moreover, Grupo Plaza and Andesmar are among the main operators of long-distance services.

1.1.3 Vehicle Delivery

Around [redacted] buses and coaches were delivered in South and Central America in 2021, 25% less than in 2019. Between 2008 and 2018, the deliveries declined by 2.4% annually but increased from 2018 to 2019 by about [redacted] units.

Deliveries of buses in South & Central America (units)



Source: National Statistical Offices, Industry Associations © SCI Verkehr

Figure 3: South & Central America: Deliveries per country

Brazil

Brazil registered about XXX new buses and coaches in 2019, XX% more than in 2018. Delivery numbers decreased again by about 33% in 2020 and 2021 as Brazil was hit hard by the Covid-19 crisis.

The Brazilian bus market is led by Daimler. Between 2019 and 2021, XX% of all sold buses in Brazil were built by Daimler. MAN, the second largest manufacturer in Brazil, reached a market share of 27%.

Agrale was the third largest bus supplier, with a market share of 14%. Other important bus manufacturers in Brazil are Iveco, Volvo and Scania. Marcopolo, the largest manufacturer of bus body in Brazil, is excluded from this market because it uses chassis technology and input from one of the mentioned companies.

Argentina

Around [redacted] buses were delivered in Argentina in 2021. Delivery declines due to Covid-19 are also visible here as deliveries nearly halved from 2019 to 2020, however, 2021 shows a recovery again.

Daimler is by far the market leader in Argentina, with a market share of over 70%. Other important bus manufacturers are Scania, Volvo, MAN and Iveco.

Colombia

In Colombia, bus deliveries declined in 2020 and 2021, reaching just XX% of 2019 delivery levels in 2021. However, 2019 represents a peak year and deliveries in the recent two years are more in line with deliveries between 2016 and 2018.

Scania and Hino are important manufacturers in Colombia and the share of Chinese manufacturers will increase in the future as BYD secured large electric bus orders from Bogota and Medellin.

1.1.4 Outlook

The South and Central American bus market has shown a strong fluctuation over the past decades. Whereas in the early 2010s the market volume in units peaked at nearly 60,000 units various national economic and political crises have led to a significant market decline. The recovery in the late 2010s was recently terminated by an output reduction during the Covid-19 pandemic. For the upcoming years until 2026 SCI Verkehr expects a market recovery to around XX units in 2026. As previously outlined the regional bus demand is challenged by the increasing activities of low-cost aviation in the long-distance segment and a growing investment in urban rail systems for the transit bus segment.

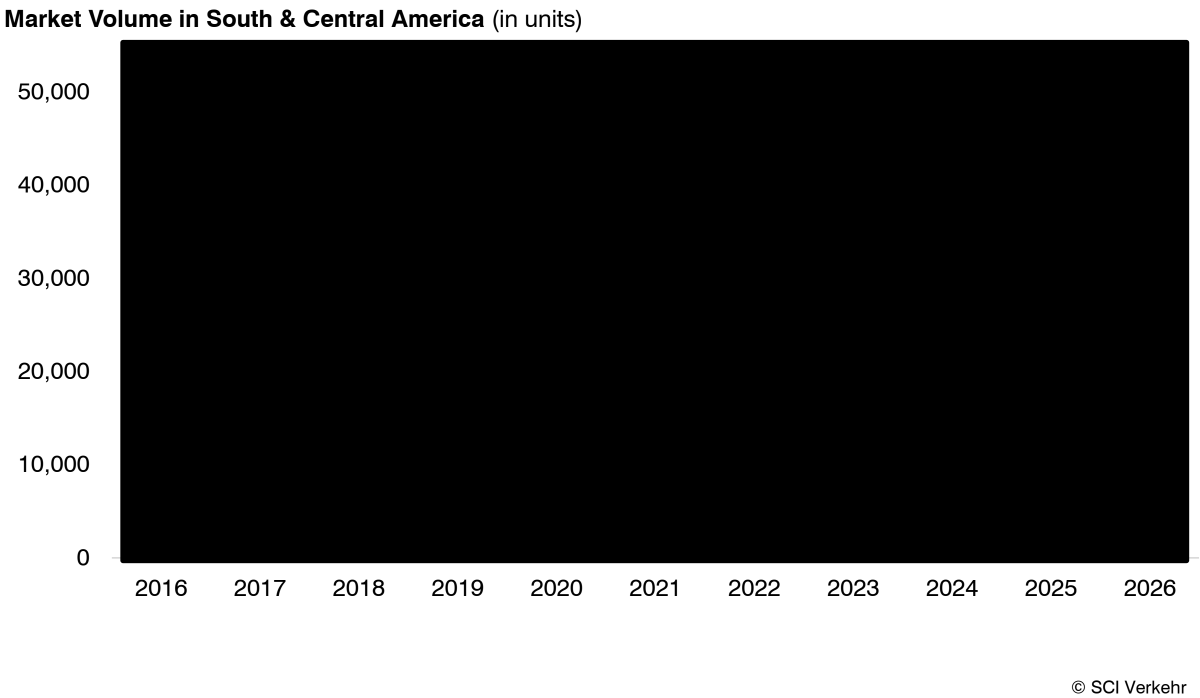


Figure 4: South & Central America: Market development in units

In comparison the market size in EUR is expected to strongly grow in the upcoming years. Chile and Colombia as the South American frontrunners in the adoption of electric buses have already contributed to a smaller decline of market volume in EUR during the pandemic. Large procurements of electric buses are also planned for the nearer future, increasingly also in other market, which drives the dynamic growth of market size in EUR.

Market Volume in South & Central America (EUR million)

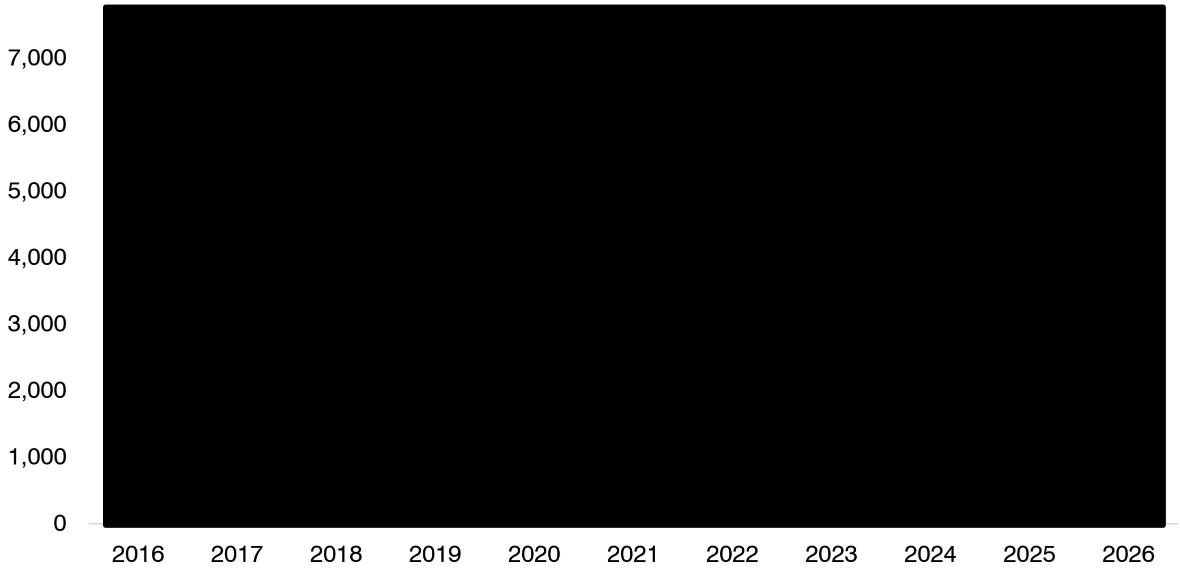


Figure 5: South & Central America: Market development in EUR

Drivers	Brief description	Relevance	Trend
Financial endowment	– Transport operators (often private companies in this region) are mainly responsible for financing new vehicles. However, the national governments help by developing financial incentives in some cases. Slower economic during and after the pandemic might reduce investment financing for private operators. Therefore, the economic recovery after the pandemic is crucial for an improved financial endowment for the procuring parties. – For the wider adoption of zero emission buses, various national and regional subsidy schemes have been introduced to compensate the price markup with respect to diesel buses.	[redacted]	[redacted]
Competition with other transport modes	– Recently in South & Central America, the competition for bus operators has considerably increased. – For the urban segment, the metro network in large cities is expected to grow by 50% within the next ten years. Often former bus services will be suspended in favour of the new metro line. Increasingly new countries and cities start the construction of metro networks. For instance, Bogota, Panama City, Quito or Salvador de Bahia will introduce metro systems in the nearer future. – For the long-distance bus operators have recently experienced dynamic competition from the liberalisation of national aviation markets. Argentina, Chile or Colombia have recently liberalised their aviation markets and new low-cost carriers such as VivaAeroBus. JetSmart or Flybondi have entered the market.	[redacted]	[redacted]
Environment and sustainability	– Remarkably, South America has dynamically developed as a wide adopter of electric buses. Particularly, the capitals of Chile and Colombia have procured more than 1,000 electric buses from China within the past two years. – The C40 initiative plays a vital role in the adoption of electric buses in South and Central America. A non-governmental programme that helps to promote growth in the electric bus market is the Zero Emission Bus Rapid Deployment Accelerator (ZEBRA) of the C40 cities initiative.	[redacted]	[redacted]
Mobility demand	– Generally, demand for public transport has been growing in the region in the past decades and is expected to continue doing so. Economic and population growth as well as continued urbanisation are the main factors behind this expansion. – Changes in mobility behaviour induced by the Covid-19 pandemic are limited with respect to Western industrialised nations as remote working is not as common.	[redacted]	[redacted]
Infrastructure development	– Many South and Central American countries are currently operating BRT systems with many cities presently expanding or constructing systems, especially in Brazil. – Given an improved availability of funds and regionally exhausted potential of BRT systems, cities shifted investments towards metro systems.	[redacted]	[redacted]

Relevance for procurement: = very high, = high, = medium, = low, = none

5-year trend: ↑ = strongly increasing, ↗ = increasing, → = constant, ↘ = decreasing ↓ = strongly decreasing

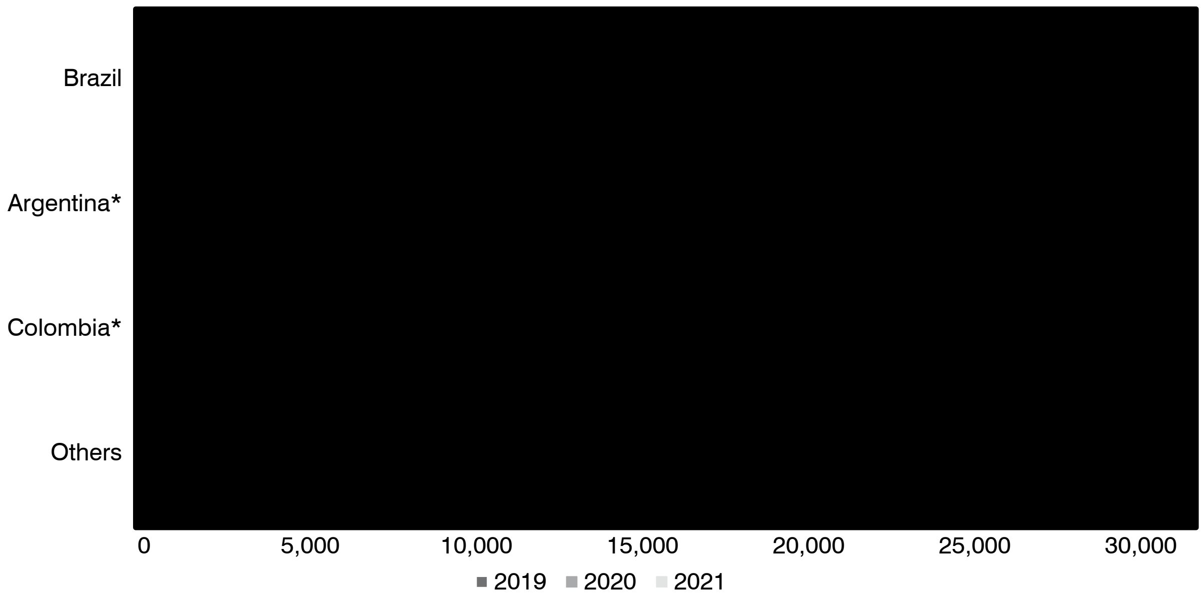
Figure 6: Drivers of the South & Central American bus market development

1.2 Competition, Production and Market shares

1.2.1 Manufacturers and Production

In 2021, about [redacted] buses were manufactured in South and Central America. This represents a decrease of about XX% compared to 2019. While production increased between 2016 and 2019, reflecting an improvement in the economic situation, the Covid-19 crisis decreased production numbers and worsened the economic situation as South and Central America was hit hard by the pandemic.

Bus production in South & Central America (in units)



Source: National Statistical Offices, Industry Associations *estimated values

Figure 7: South & Central America: Bus production per country

Brazil still accounts by far for the majority of the South and Central American bus production, generating about 80% of the region's output. Argentina and Colombia sharing the position as the second most important bus manufacturing country in the region. Other bus manufacturing countries in the region are Costa Rica, Uruguay and Venezuela.

Brazil

Brazil is the largest bus manufacturing country in South and Central America with [redacted] units produced in 2021. Brazil has a generally strong automotive sector, but production fell by XX% p.a. between 2013 and 2016 because of a severe economic crisis affecting the national market. Since 2016, the economy and with it the production began to recover, and production rose by more than 50% in 2018 compared to 2016.However the Covid-19 crisis led to a decline in production by about 30% in 2021 compared to 2019.

In recent years the government tried to help the bus industry with federal school bus procurement schemes. Until 2014, Brazil only produced diesel buses, but the production of buses with alternative propulsion is growing.

While the majority of production is for the large domestic market, exports are also relevant: of the [redacted] manufactured buses, around one fourth were exported. The main export markets are other South ….

1.2.2 Market shares

Market shares per manufacturer in South & Central America (in units, 2019-2021)

Others
12%

[redacted]

Source: National Statistical Offices, Industry Associations, SCI estimation © SCI Verkehr

Figure 8: South & Central America: Market share per manufacturer

Overall, bus and coach deliveries throughout South and Central America are led by companies manufacturing within the region. Daimler is leading the market with a share of [redacted]% between 2019 and 2021, followed by [redacted] with a share of [redacted]%. Compared to 206-2018, Daimler's market share decreased by 6% while [redacted] market share increased by 7%. The Brazilian manufacturer [redacted] (11%) can secure the third place in front of other European OEMs such as [redacted] (5%), [redacted] (5%) and [redacted] (3. [redacted] is the leading body manufacturer in the region.

Next to these large manufacturers, numerous smaller companies, often local producers, sell buses and coaches in South and Central America. Asian bus and minibus manufacturers play an increasingly important role on the South and Central American market. Yutong has completed electric bus deliveries to Chile and BYD has won several large-scale contracts in Colombia for a total of 1,550 e-buses.

1.3 Daimler Trucks

Daimler Trucks	
Overview	
Headquarters Mercedesstraße 137 70327 Stuttgart, Germany https://www.daimlertruck.com/en/ **Tel: +49 711 17 0**	**Development of turnover and EBIT (Daimler Buses Unit)** *(FY ending Dec)* [redacted]
Current Shareholders	
Mayor subsidiaries and affiliates	– EvoBus GmbH (100%) – Mercedes-Benz Türk (67%) – Polomex (24%, together with Marcopolo) <u>Daimler Trucks:</u> – Mitsubishi Fuso Truck and Bus Corporation (89.29%, together with Mitsubishi)
Units sold (2021)	18,736

Year	Employees	Revenue (EUR mn)	EBIT (EUR mn)	Margin
2021	14,861	3211	-152	-4.7%

Company description

<u>Company history</u>

In 1895, Karl Benz revolutionized public transportation, introducing the first bus ever made. Intended to cover the distance between Siegen, Netphen and Deuz, the Benz bus was able to carry eight people in addition to the driver. Due to economic hardships in the early twentieth century, the German manufacturers Benz and Daimler merged in 1926, forming Daimler-Benz AG. In the next year, the company presented its first joint bus range.

In 1995, Daimler-Benz Bus and Coach range and Kässbohrer Bus Division merged and formed a new subsidiary, EvoBus GmbH, presenting a new bus range the following year. In 2001, Daimler Buses replaced Volvo AB as the strategic partner of

Company description
Mitsubishi in the bus and truck sector. Today, Daimler has a share of 89% in the Mitsubishi Fuso Truck and Bus Corporation (MFTBC), which is one of the leading manufacturers of commercial vehicles in Asia.

Company strategy

While Daimler Buses mainly sells complete buses in Europe and the NAFTA region, the business in Latin America, Africa and Asia is focused on the production and distribution of bus chassis. European bus operations are managed by EvoBus GmbH. The buses are produced under the brand names Mercedes-Benz and Setra. Under the name OMNIplus services are offered for both brands. Since 2015, coaches and school buses are also being produced by BharatBenz in India. In Europe, Daimler Buses places emphasis on technology leadership and a mix of service, sustainability (with reductions in vehicle weight and consumption) and increasing comfort for passengers. Thus, the unit has enhanced its product range’s flagship vehicle, the city bus Mercedes-Benz Citaro. In the end of 2018, series production of the electrically powered Mercedes-Benz eCitaro has started. Daimler Buses North America used to combine three bus brands under one corporate structure: Orion transit (city) buses, Setra coaches and the Sprinter shuttle bus. However, since Daimler does not expect the transit bus business in North America to recover in the next several years, it has decided to exit the business in North America in April 2012 and to wind down production of Orion buses in the US and in Canada. As a consequence, Orion has ceased to accept new orders and its production facilities will be closed or reduce their activity as it transitions to providing aftersales service. Part of the reconfiguration of the operations in North America is also the establishment of a strategic partnership with Motor Coach Industries International (MCI) to distribute Setra German-manufactured premium coaches.

In Latin America, Daimler Buses focuses its further growth on the chassis business and consistent expansion of its product range.

Daimler AG as former parent group of Daimler Trucks & Buses has span off its subsidiary Daimler Trucks & Buses by the end of 2021. Since then, Daimler Truck & Buses is individually publically listed.

Alternative drive technologies

Since autumn 2018, the Mercedes-Benz eCitaro has been built and delivered in series production. Mid 2018, Daimler Trucks & Buses has additionally bundled its entire expertise in the field of electromobility under the umbrella of the E-Mobility Group. Regardless of brand or segment, the e-strategy for components and the e-product strategy are defined, implemented and, similar to the platform strategy, a holistic electrical architecture is worked on. Synergies are thus exploited to the maximum and investments are used optimally. Under Thomas Built Buses, Daimler also introduced the first Saf-T-Liner eC2 electric school bus as early as 2017. In addition, Mercedes-Benz offers the Citaro model with emission limit values VI, with gas engine (Citaro NGT), and also as a hybrid variant.

Current results

Following a successful year of 2019 with records in revenue, profit and production volume, the key performance indicators of Daimler Buses plunged with the outbreak of the Covid 19 pandemic. In the financial year 2021, Daimler Buses sold 18,736 buses and chassis worldwide in comparison to a volume 18,932 in the previous year. The revenue amounted to EUR 3,438 million in 2020 and sank to EUR 3,211 million in the consecutive year 2021. Similarly, EBIT diminished from EUR 67 million to - EUR 152 million in 2021.

Region	Remarks
Brands for Buses	Daimler Buses – Mercedes-Benz – Setra – BharatBenz – Thomas Built Buses
Market Segments	– City buses (incl. chassis) – Interurban buses (incl. chassis) – Coaches (incl. chassis) – Minibuses (incl. chassis) – Specialist buses, e.g., school, airport (incl. chassis)
Drive Technologies	– Diesel – CNG – Diesel-electric hybrid – Fuel cell hybrid