

# 2011 Transportation Tomorrow Survey

## Data Presentation

# Participating Agencies

The City of  
**BARRIE**



CITY OF  
**BRANTFORD**



CITY OF  
**Guelph**  
Making a Difference

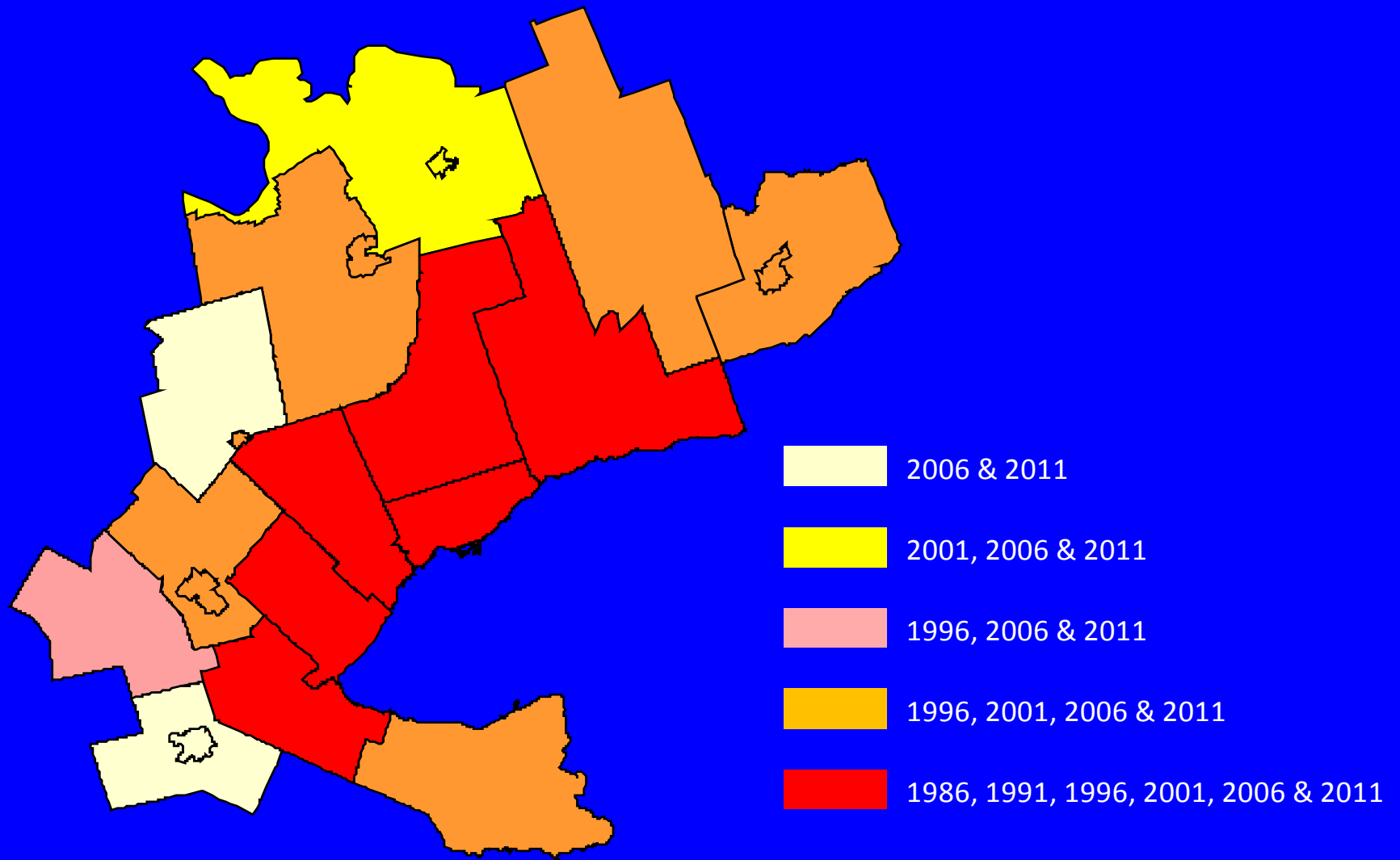


# Conduct of the Survey

# Supporting Agencies of TTS

Agency	1986	1991	1996	2001	2006	2011
Ministry of Transportation, Ontario	Y	Y	Y	Y	Y	Y
Metrolinx	Y	Y	Y	Y	Y	Y
Toronto Transit Commission	Y	Y	Y	Y	Y	Y
City of Toronto	Y	Y	Y	Y	Y	Y
Regional Municipality of Durham	Y	Y	Y	Y	Y	Y
Regional Municipality of York	Y	Y	Y	Y	Y	Y
Regional Municipality of Peel	Y	Y	Y	Y	Y	Y
Regional Municipality of Halton	Y	Y	Y	Y	Y	Y
City of Hamilton	Y	Y	Y	Y	Y	Y
Regional Municipality of Niagara			Y	Y	Y	Y
Regional Municipality of Waterloo			Y		Y	Y
City of Guelph			Y	Y	Y	Y
County of Wellington			Y	Y	Y	Y
Town of Orangeville			Y	Y	Y	Y
City of Barrie			Y	Y	Y	Y
County of Simcoe			Y	Y	Y	Y
City of Kawartha Lakes			Y	Y	Y	Y
City of Peterborough			Y	Y	Y	Y
County of Peterborough			Y	Y	Y	Y
City of Orillia				Y	Y	Y
County of Dufferin					Y	Y
City of Brantford					Y	Y
County of Brant						Y
<b>Total number of agencies</b>	<b>9</b>	<b>9</b>	<b>19</b>	<b>19</b>	<b>22</b>	<b>23</b>

# Survey Area



# 2011 TTS Interview Phases

Phase	Completed Interviews	Staff
1. September 2011 - December 2011	65,449	198
2. September 2012 - December 2012	93,708	286

# Sample Control

## Telephone Listings from Cornerstone

- August – Preliminary lists of Survey Area
- October – Complete listing to cover 5% sample
- Supplementary lists as necessary

5% Sample across survey area controlled by  
Canada Post's Forward Sortation Areas

Preliminary data expanded to 2011 Census  
dwelling units

Final data adjusted to 2011 Census population by age

# Survey Procedure

- Advance Letter
- Web survey and/or Telephone Interview  
(maximum of 8 attempts)
- Geocode all Location Information
- Call Back if necessary



# Survey Questions in 2011 TTS

## Household

- Home Location
- # of People
- # of Vehicles
- Dwelling Type

## Person

- Age & Gender
- Licence to Drive
- Transit Pass
- Employment & Student Status
- Occupation
- Availability of Free Parking at Work
- Work at Home on Survey Day

## Trip

- Origin & Destination Locations
- Purpose
- Start time
- Mode of Travel
- Details of Transit Trips: Access, Egress & Routes
- Details of Auto Driver Trips: Use of Hwy 407 & Carpool

# Interview Process in 2012

## Equipment

- 120 interview stations, 8 monitoring stations, 8 call-in stations, and 10 coding stations on a local area network

## Four interview teams

- Interviewing hours:
  - Evenings: 5:30 p.m. – 9:30 p.m.
  - Saturdays: 10:00a a.m. – 4:00 p.m.

## Daytime Interview Team

- Schedule Call-backs
- Respondent Call-ins
- Visual review of completed interviews

# Geocoding Process in 2012

## All Location Data

- Home Address
- Usual Place of Work and School
- Location of every trip origin and trip destination

## UTM (Universal Transverse Mercator) Coordinates

## X-Y Coordinates Assigned to

- 2001 and 2006 Traffic Zone System

# Quality Control

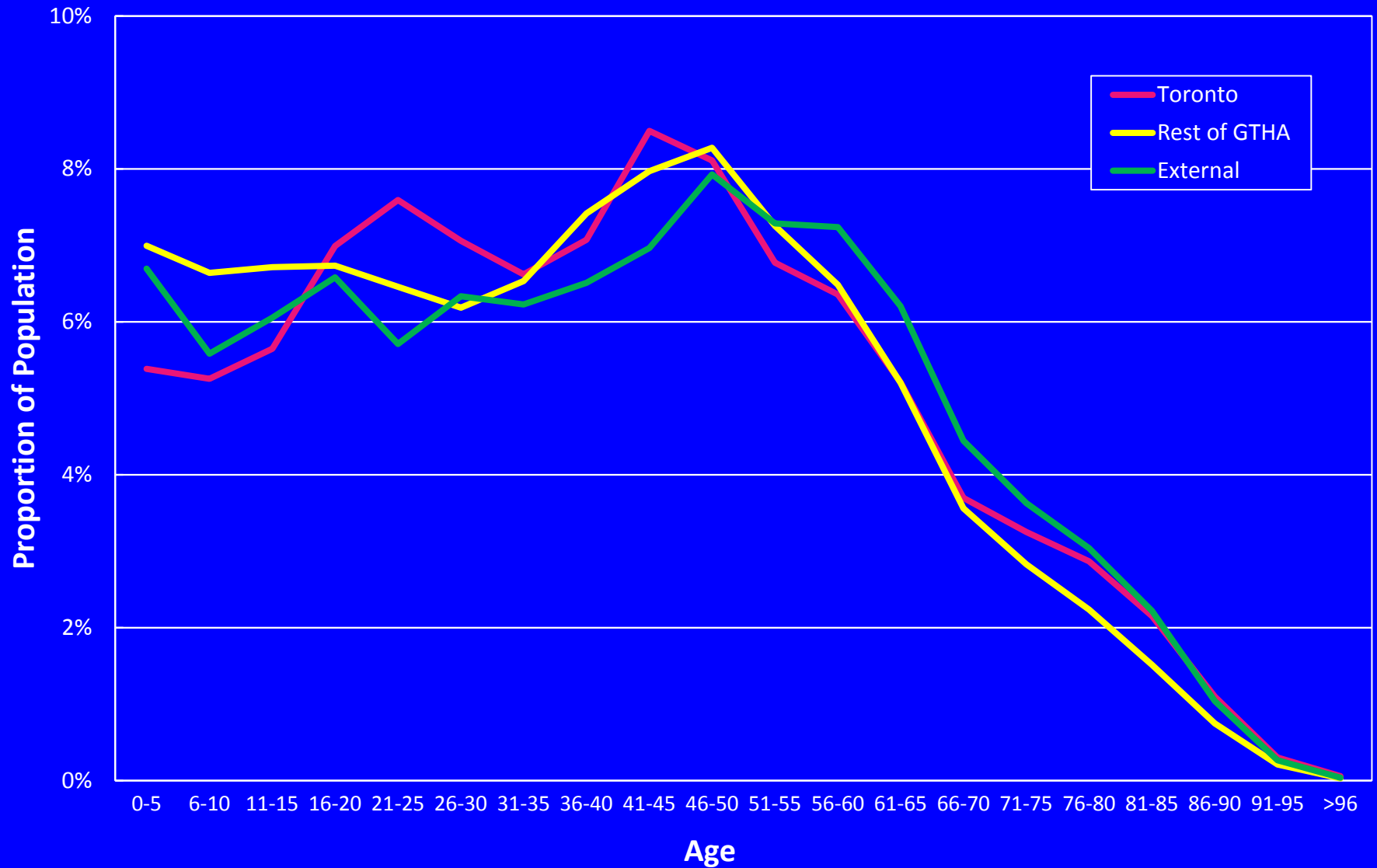
- Logic checks in interview and geocode software
- Silent Telephone Monitoring
- Validation Checks Run Nightly
- Visual Review of Printouts of Completed Interviews
- Extensive Logic and Validation Checks Processed on Completed Database

# 2011 TTS Data Summary

# 2011 TTS - Number of Records

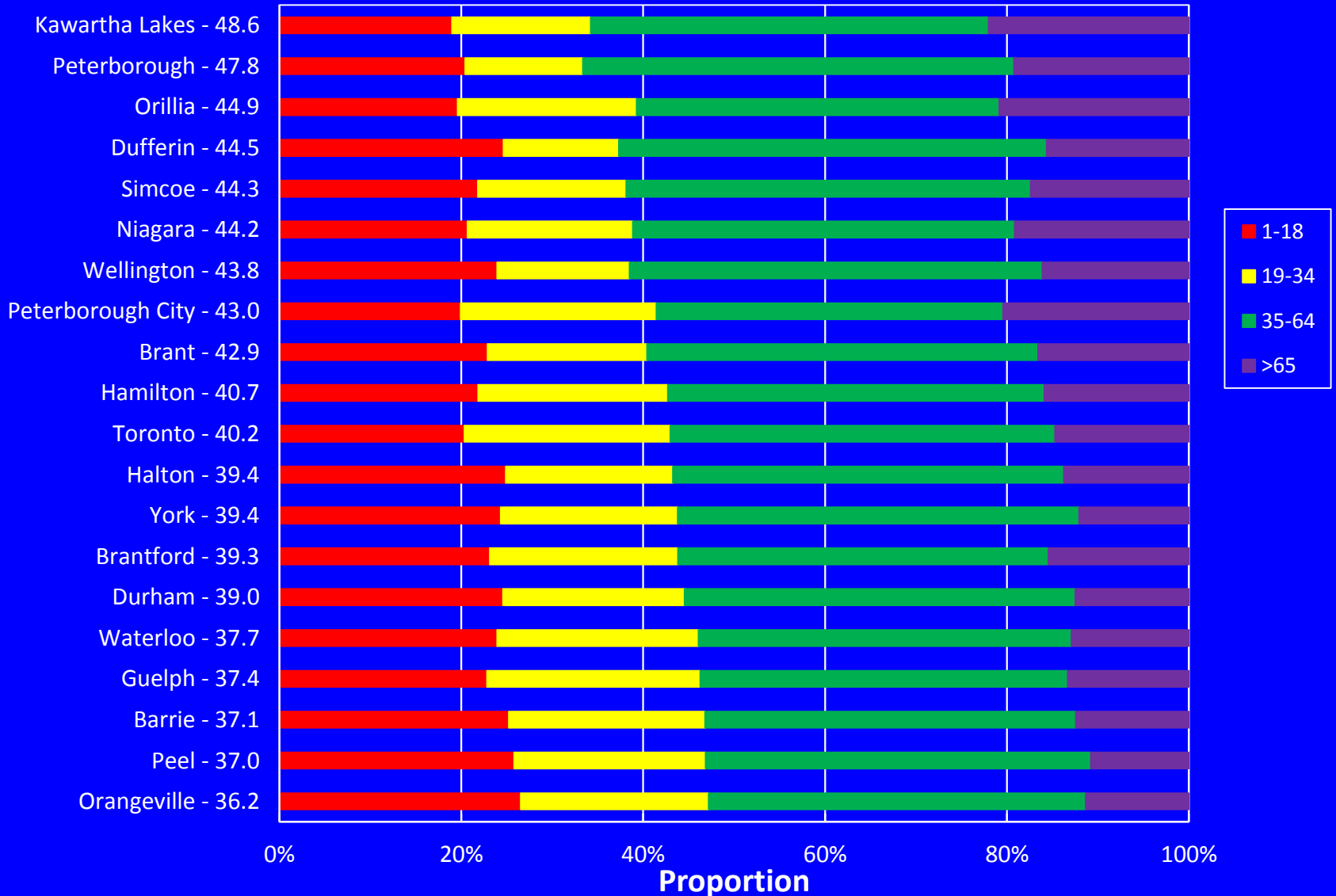
Participating Agency	Households	Persons	Trips
City of Toronto	51,961	125,518	243,374
Regional Municipality of Durham	10,841	28,599	63,095
Regional Municipality of York	16,580	49,288	105,391
Regional Municipality of Peel	19,503	59,133	120,986
Regional Municipality of Halton	8,926	23,190	51,962
City of Hamilton	10,469	25,274	53,437
Regional Municipality of Niagara	9,246	21,367	48,148
Regional Municipality of Waterloo	10,412	26,762	59,853
City of Guelph	2,474	6,143	13,756
County of Wellington	1,503	4,006	8,965
Town of Orangeville	589	1,531	3,437
City of Barrie	2,416	6,106	13,013
County of Simcoe	6,114	14,600	31,655
City of Kawartha Lakes	1,592	3,598	7,564
City of Peterborough	1,670	3,622	8,521
County of Peterborough	1,067	2,548	5,705
City of Orillia	751	1,663	3,825
County of Dufferin	507	1,316	2,675
City of Brantford	1,892	4,551	9,873
County of Brant	644	1,589	3,613
<b>Total</b>	<b>159,157</b>	<b>410,404</b>	<b>858,848</b>

# Population Distribution by Age Cohort



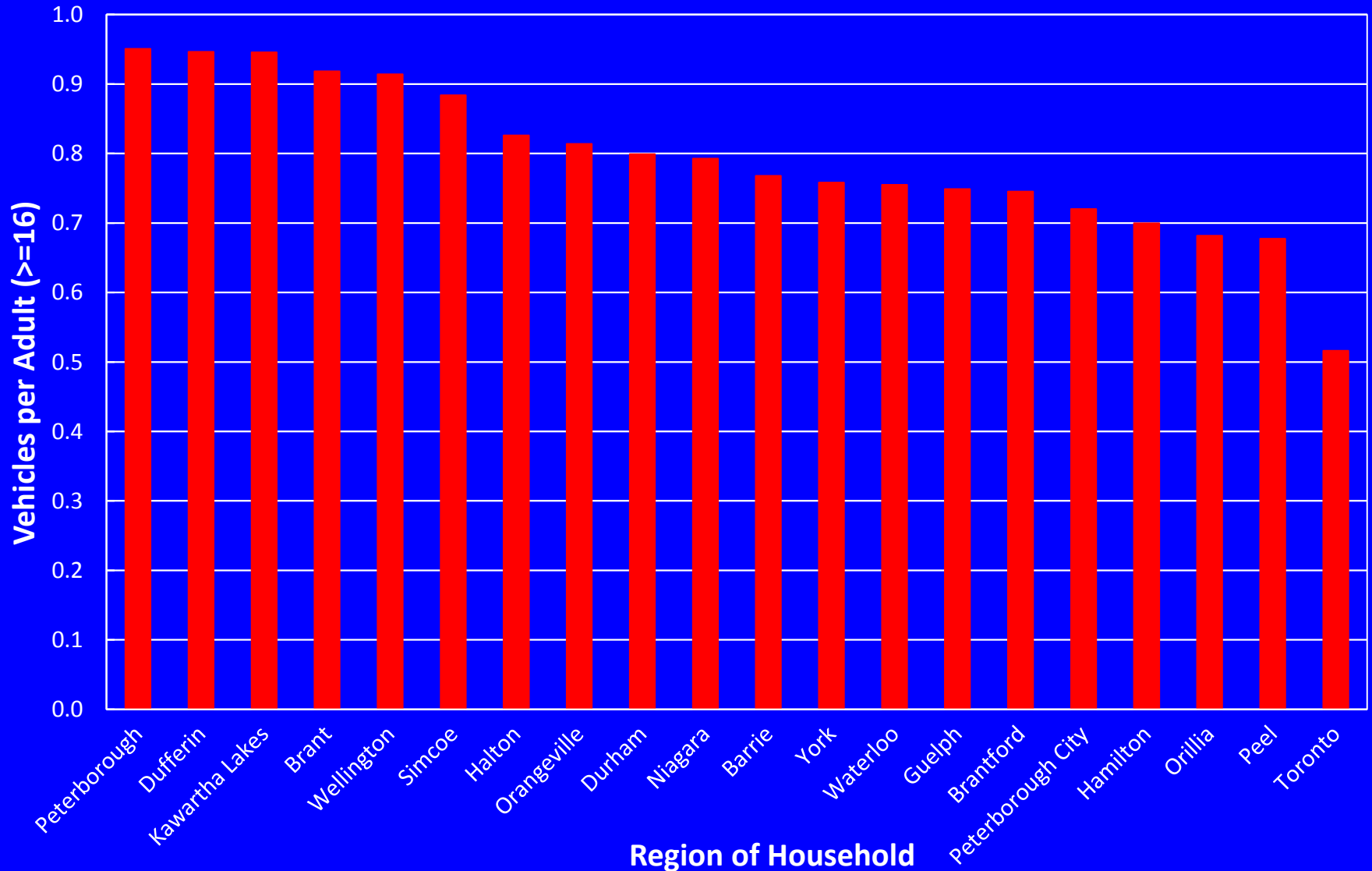
# Population Distribution and Median Age

Region of Household and Median Age

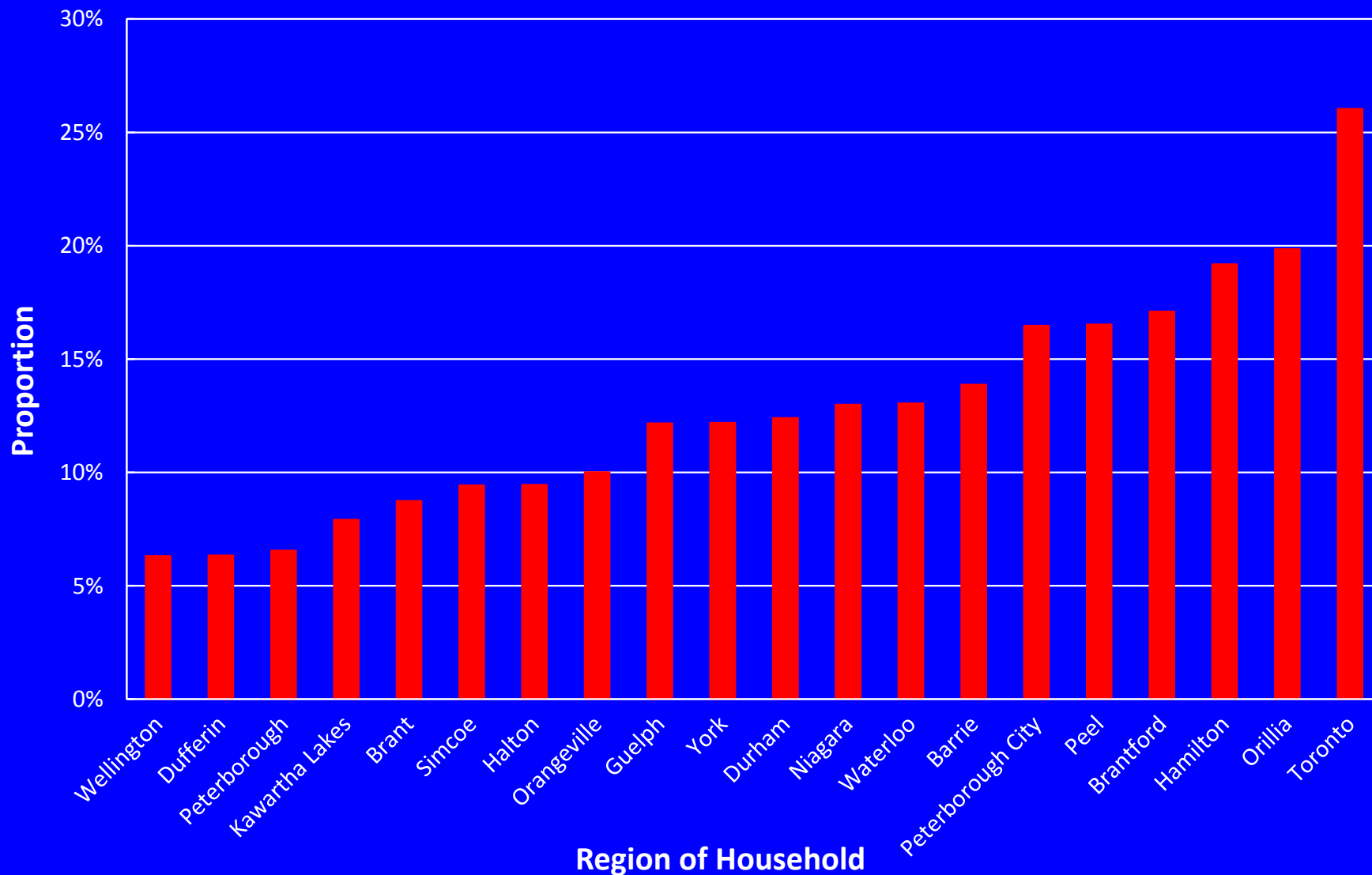




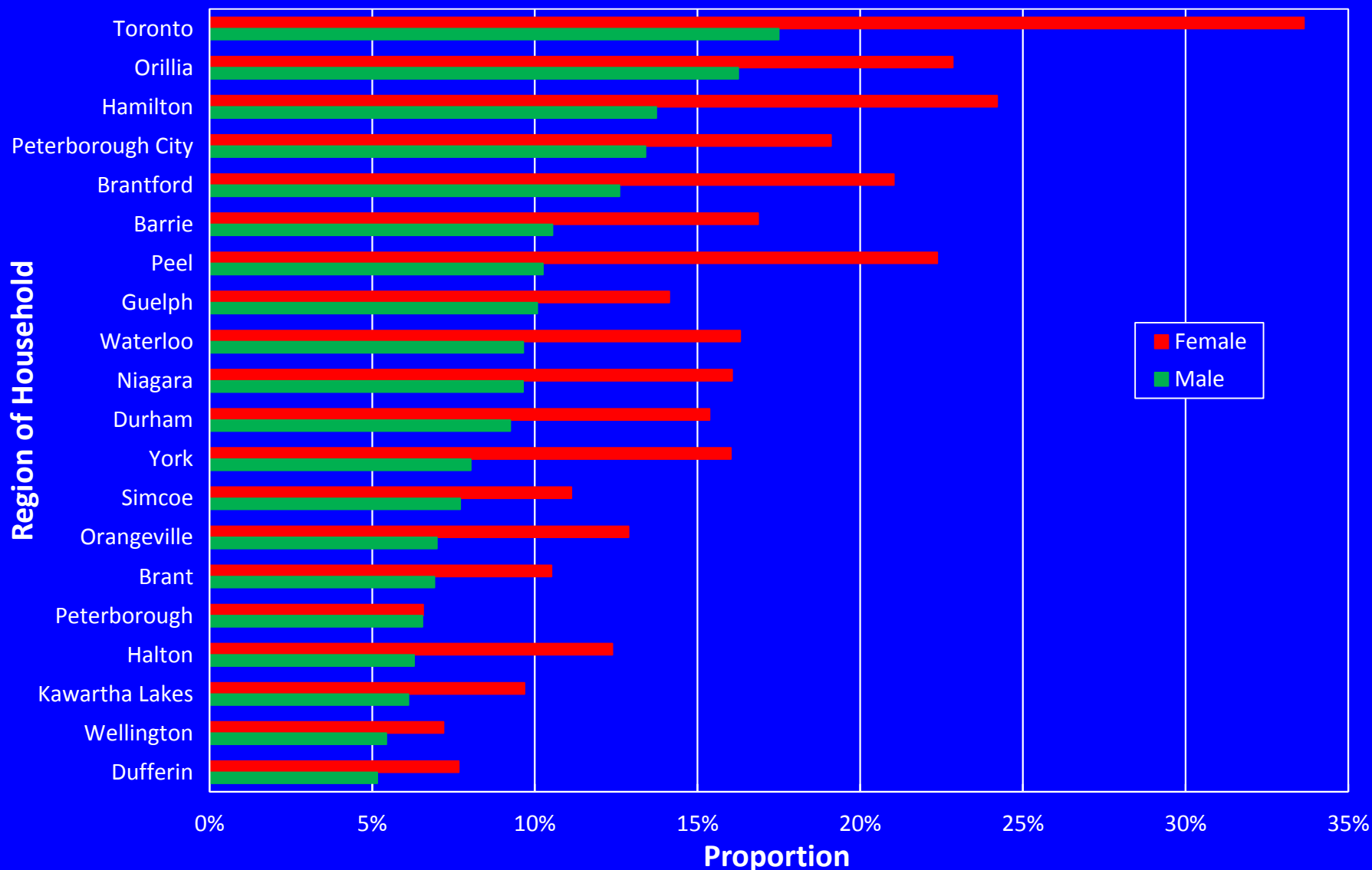
# Vehicle Availability



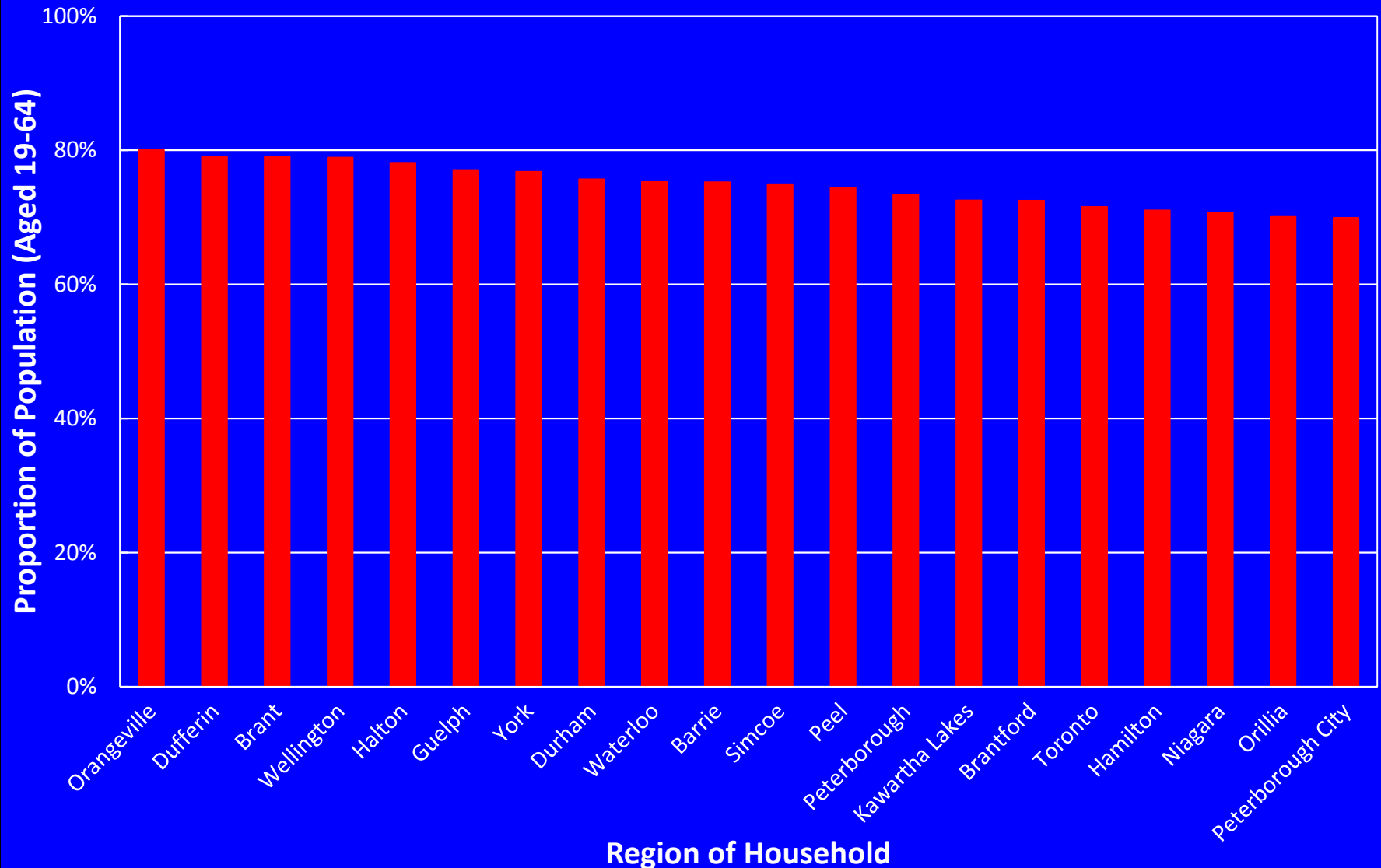
# Proportion of Adults ( $\geq 16$ ) Without a Driver's Licence



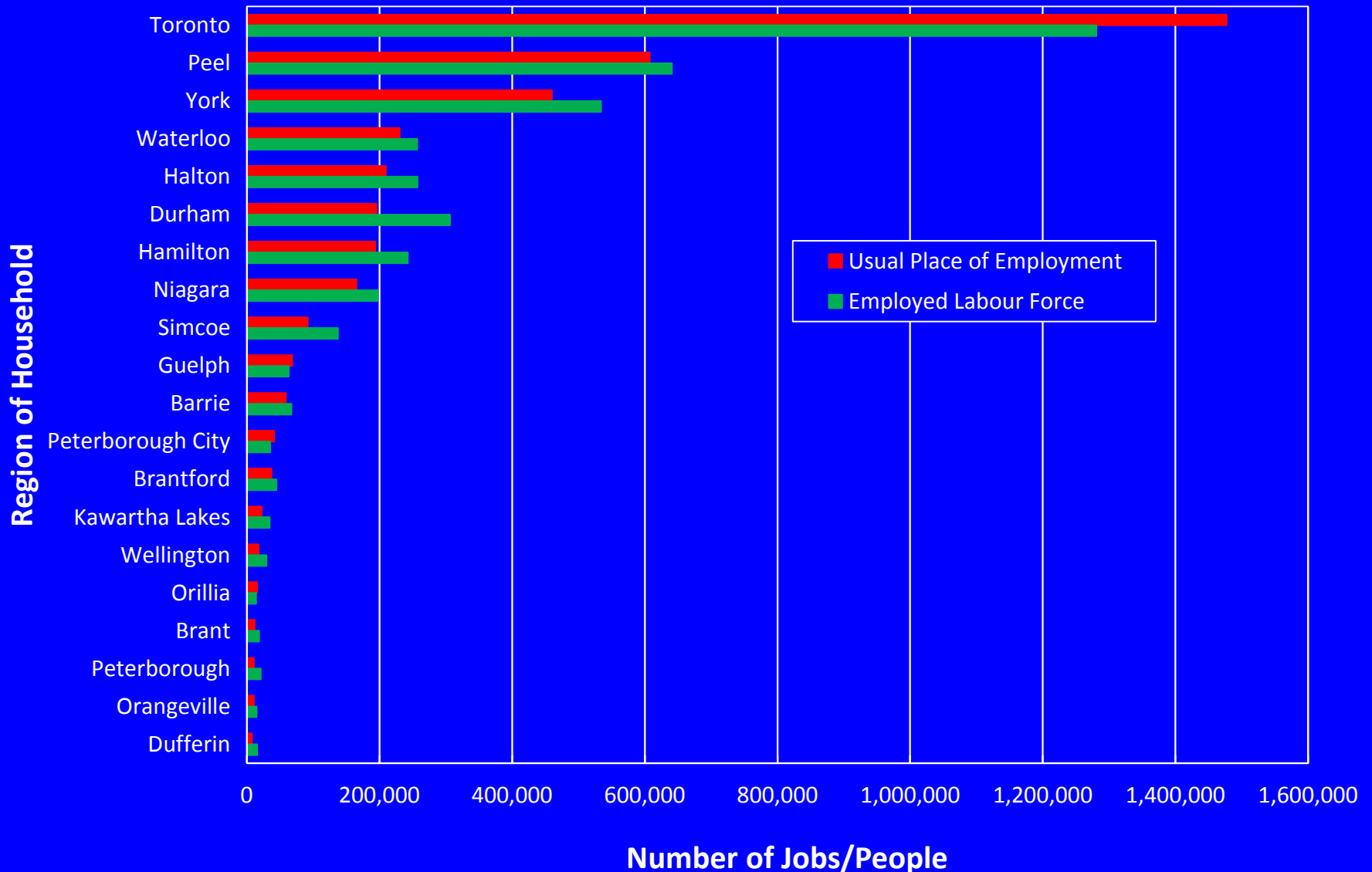
# Proportion of Adults ( $\geq 16$ ) Without a Driver's Licence



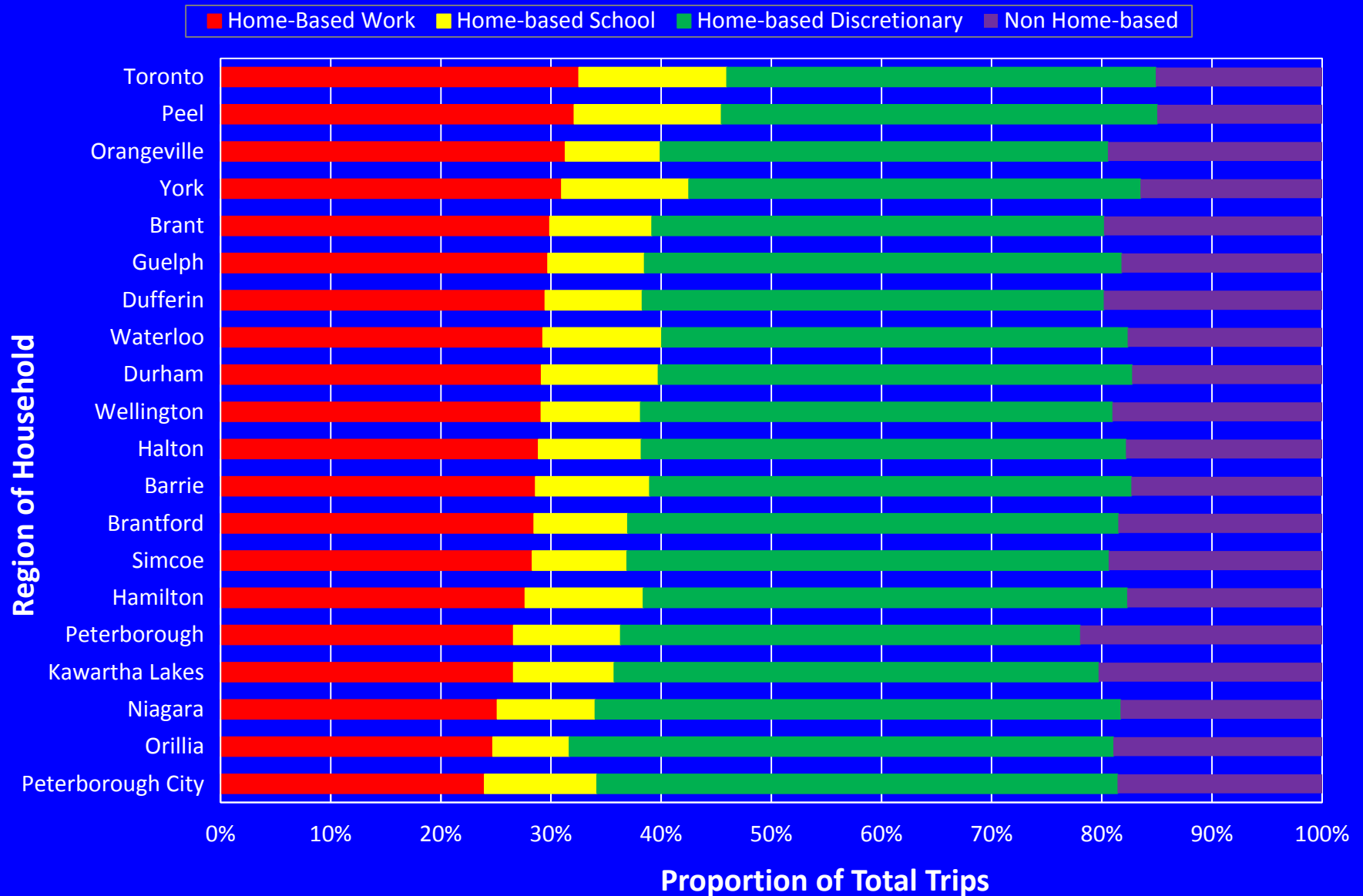
# Employed Labour Force Participation Rate



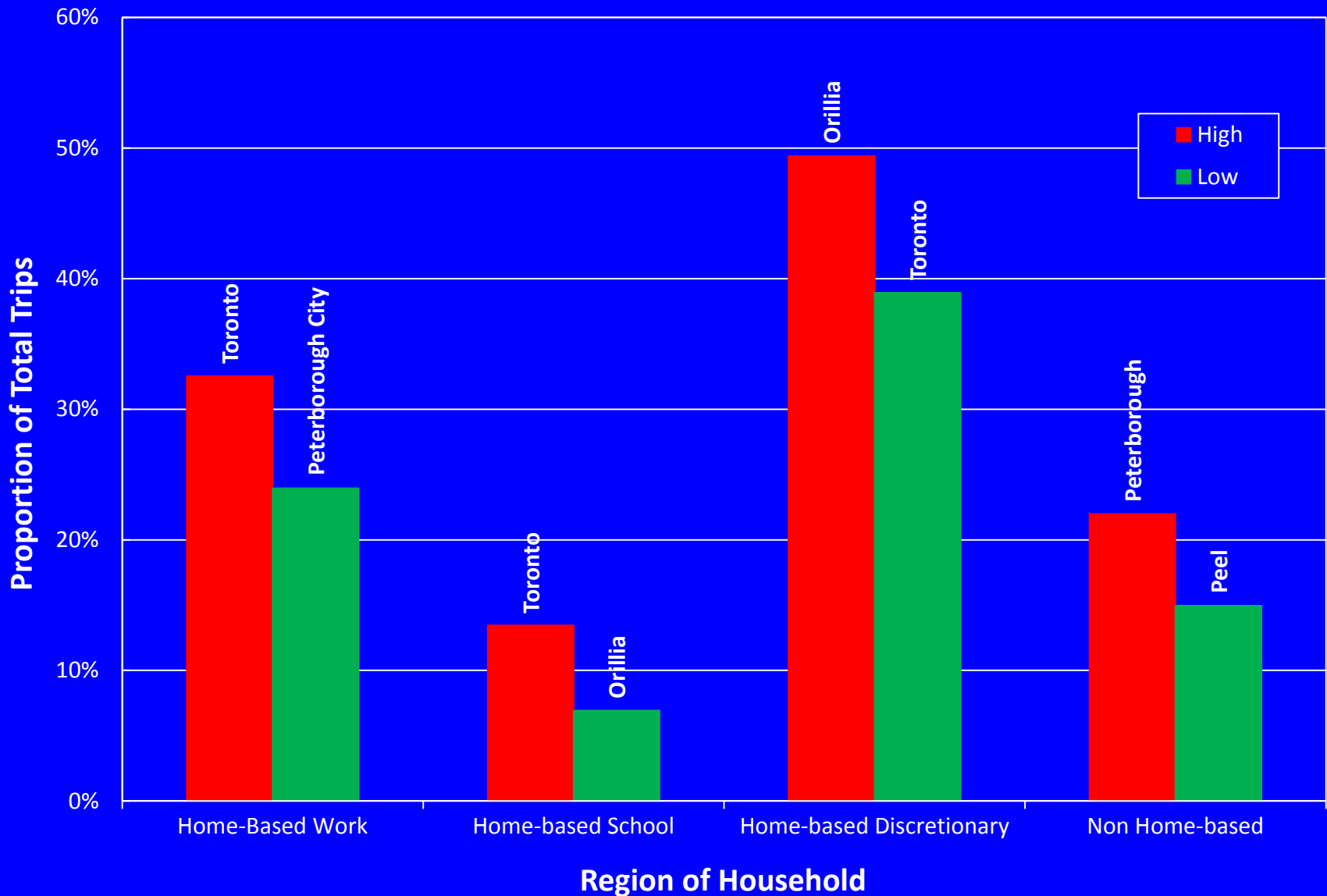
# Employment vs. Employed Labour Force



# Trips by Trip Purpose



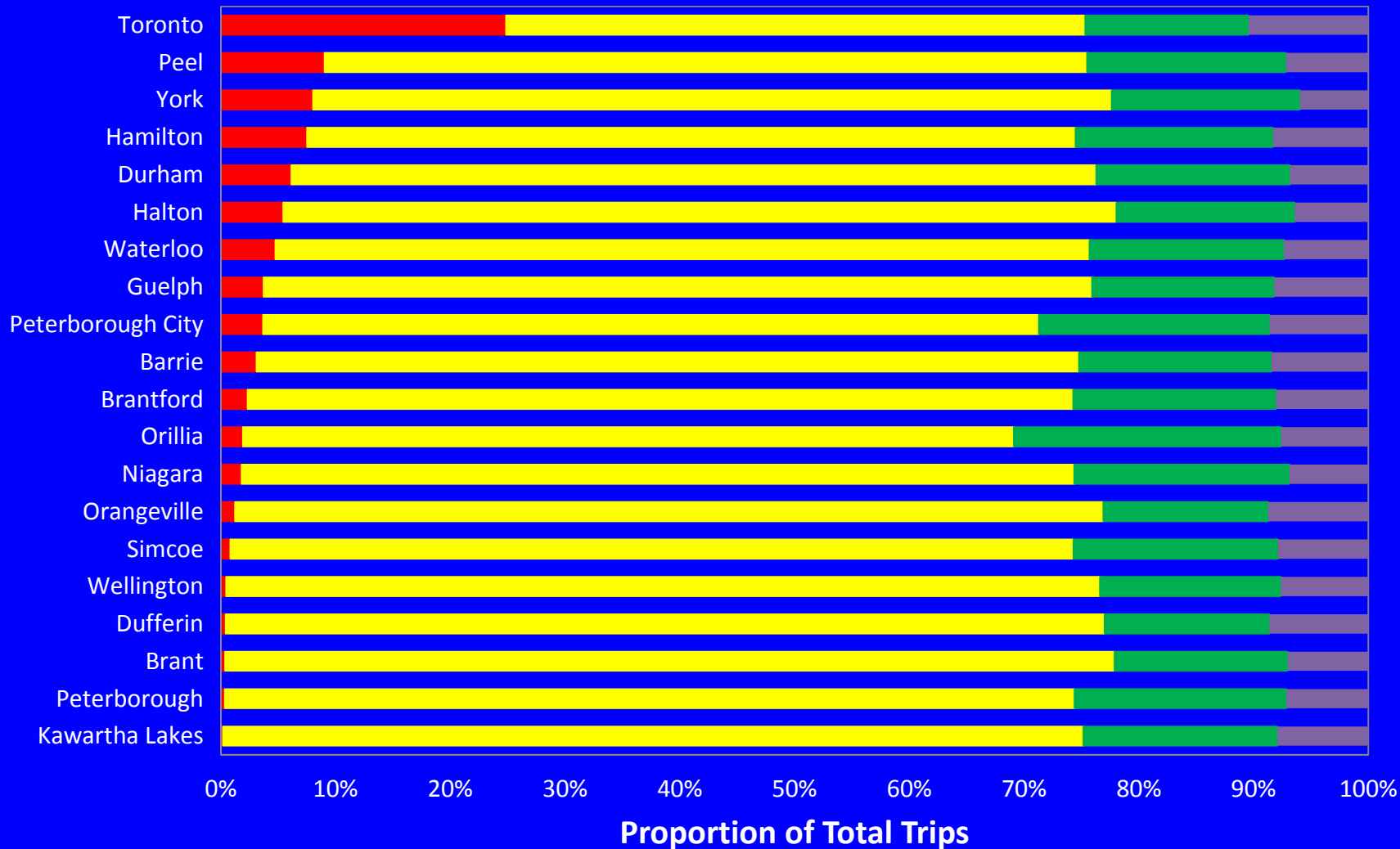
# Trip Purpose



# Mode Split - All Trips

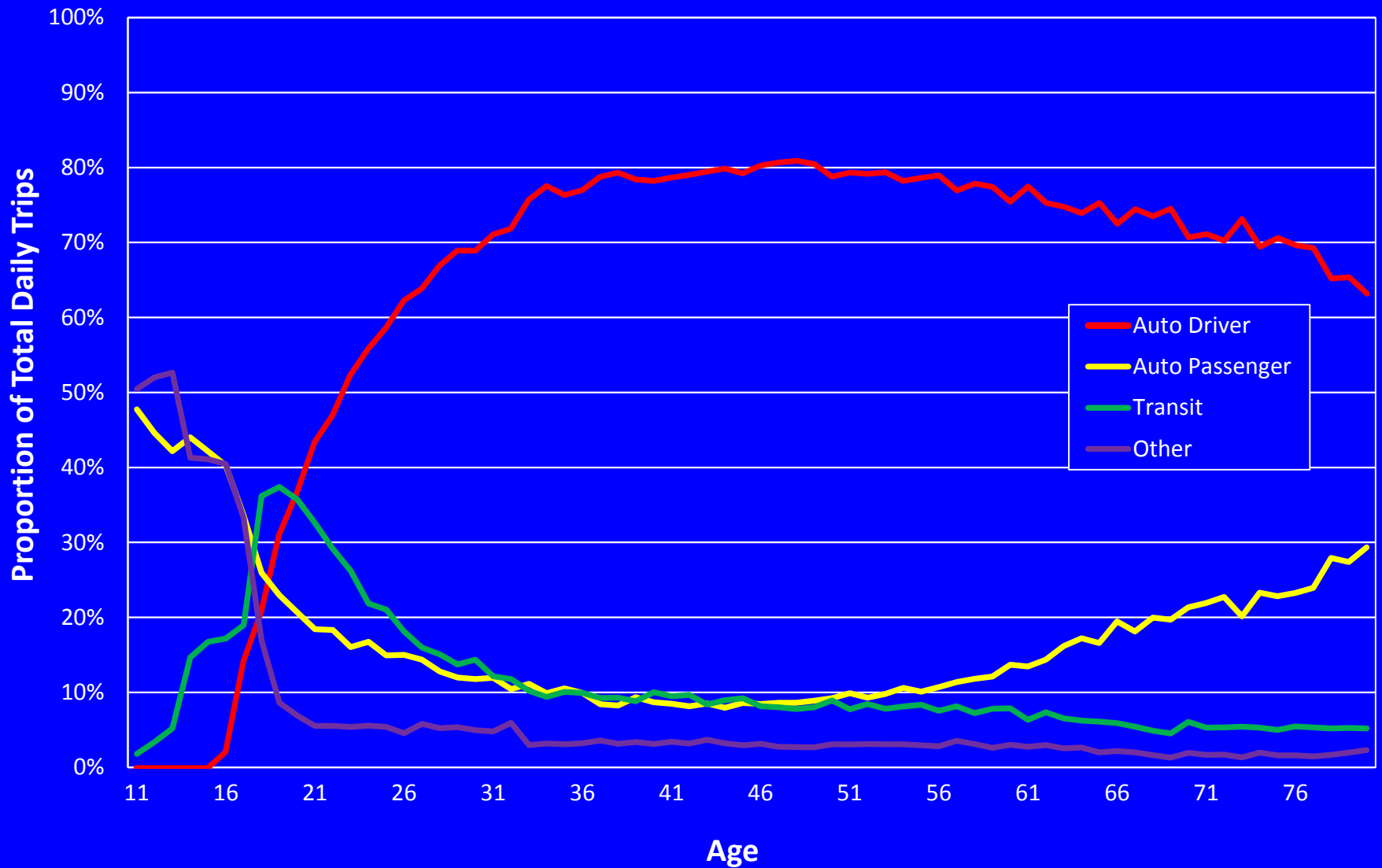
Transit Auto Driver Auto Passenger Other

Region of Household

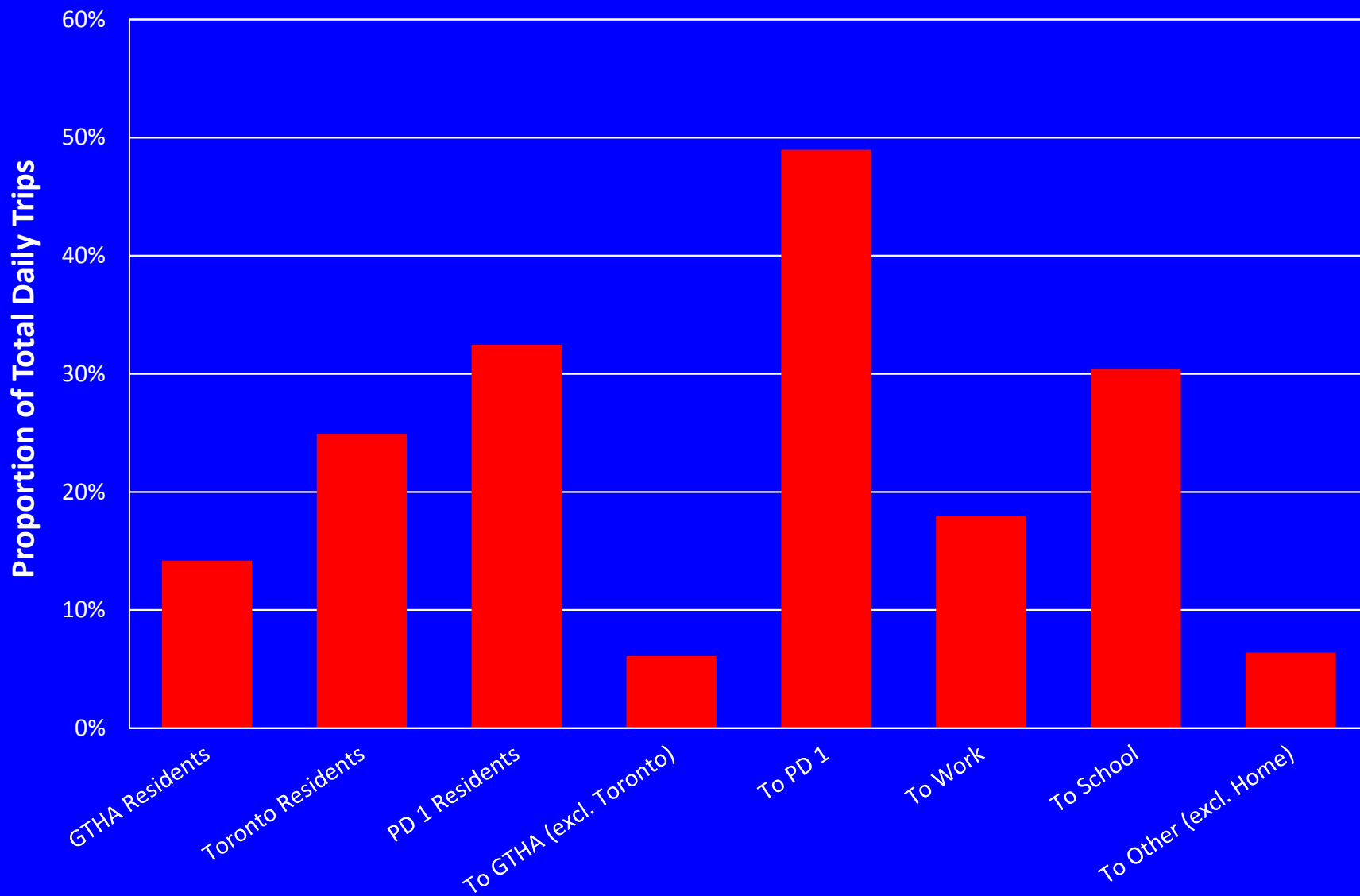




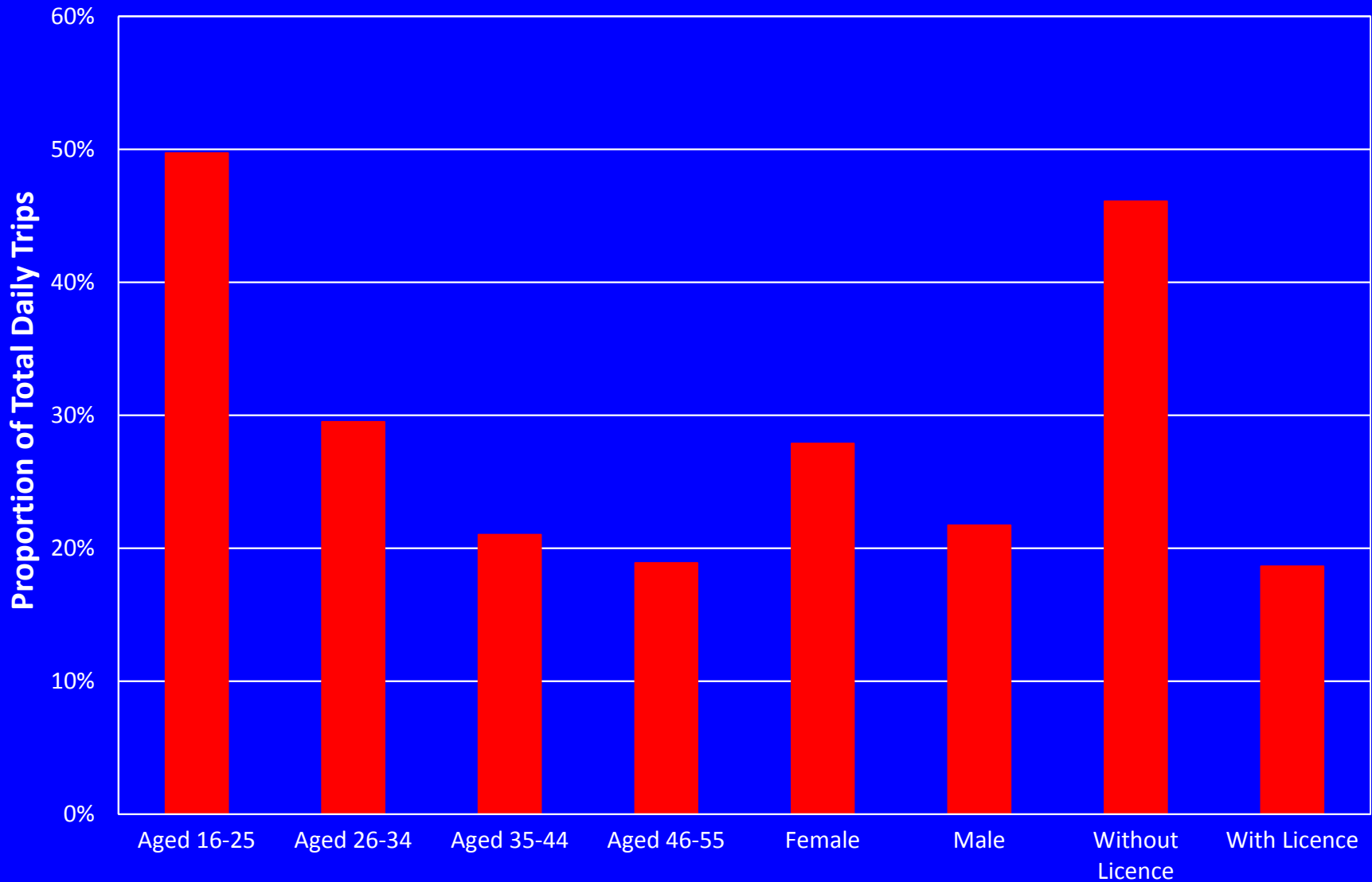
# Mode Split - Total Survey Area



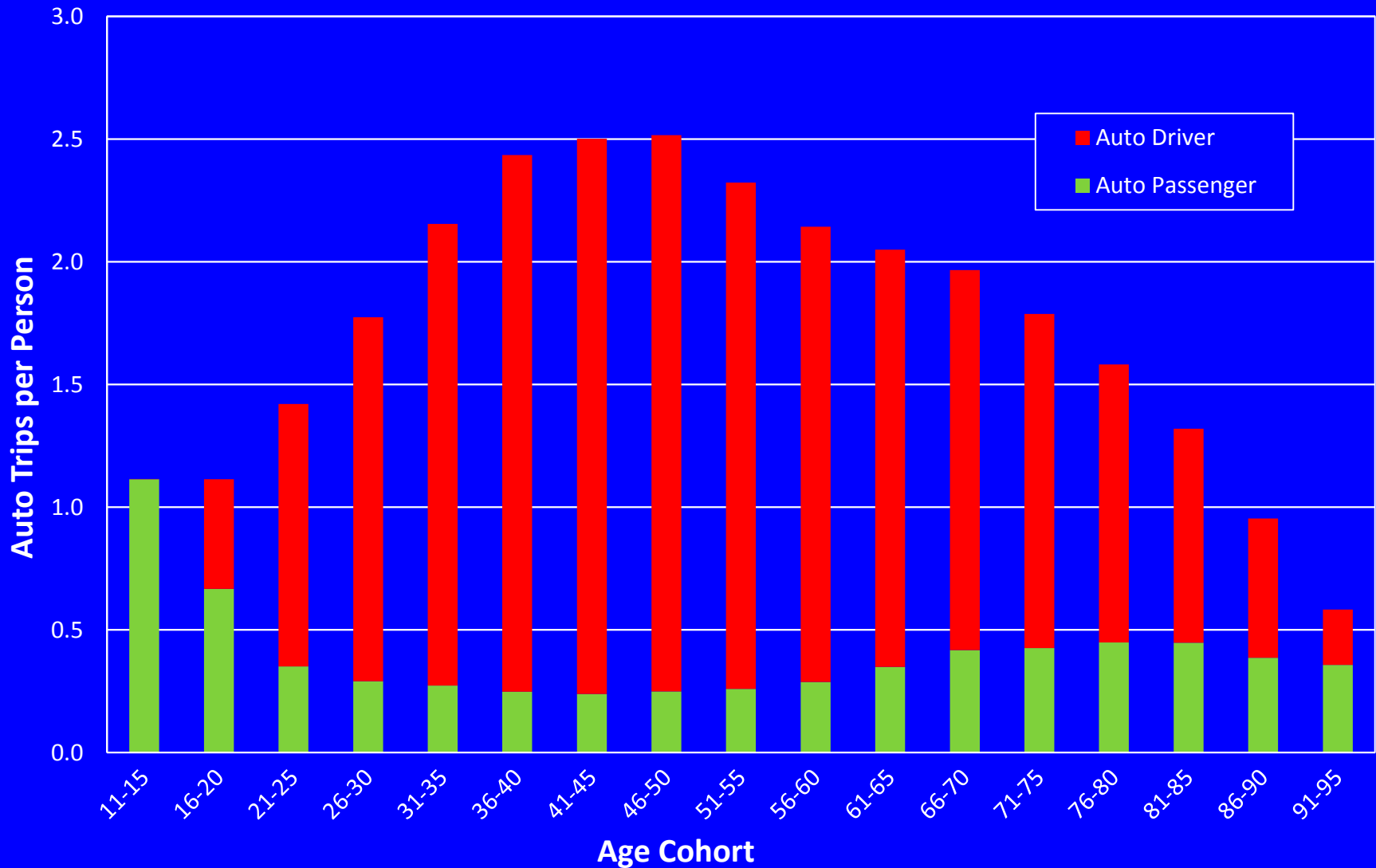
# Transit Mode Split by GTHA Residents



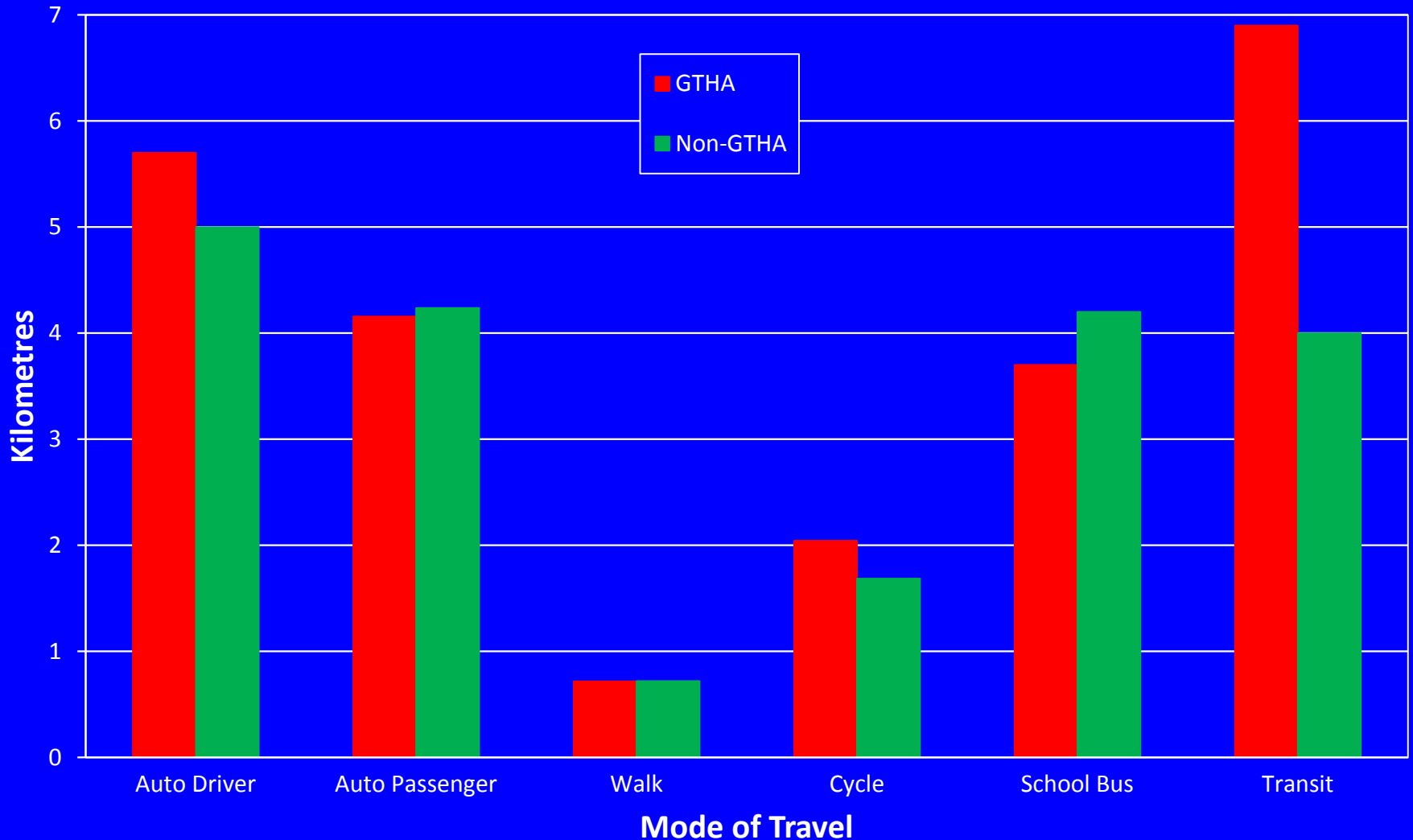
# Transit Mode Split by Toronto Residents



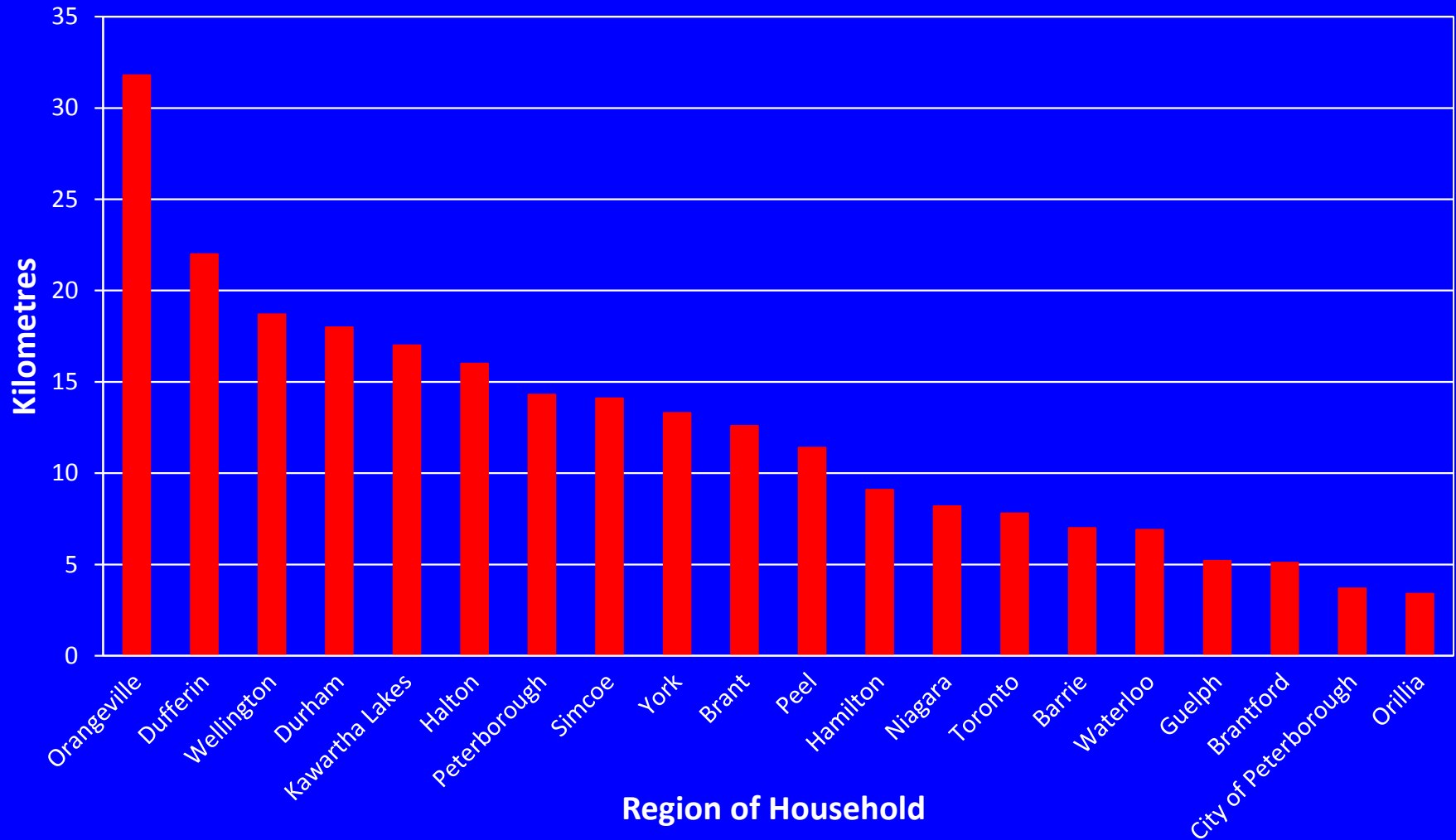
# Auto Trip Rate (Driver and Passenger)



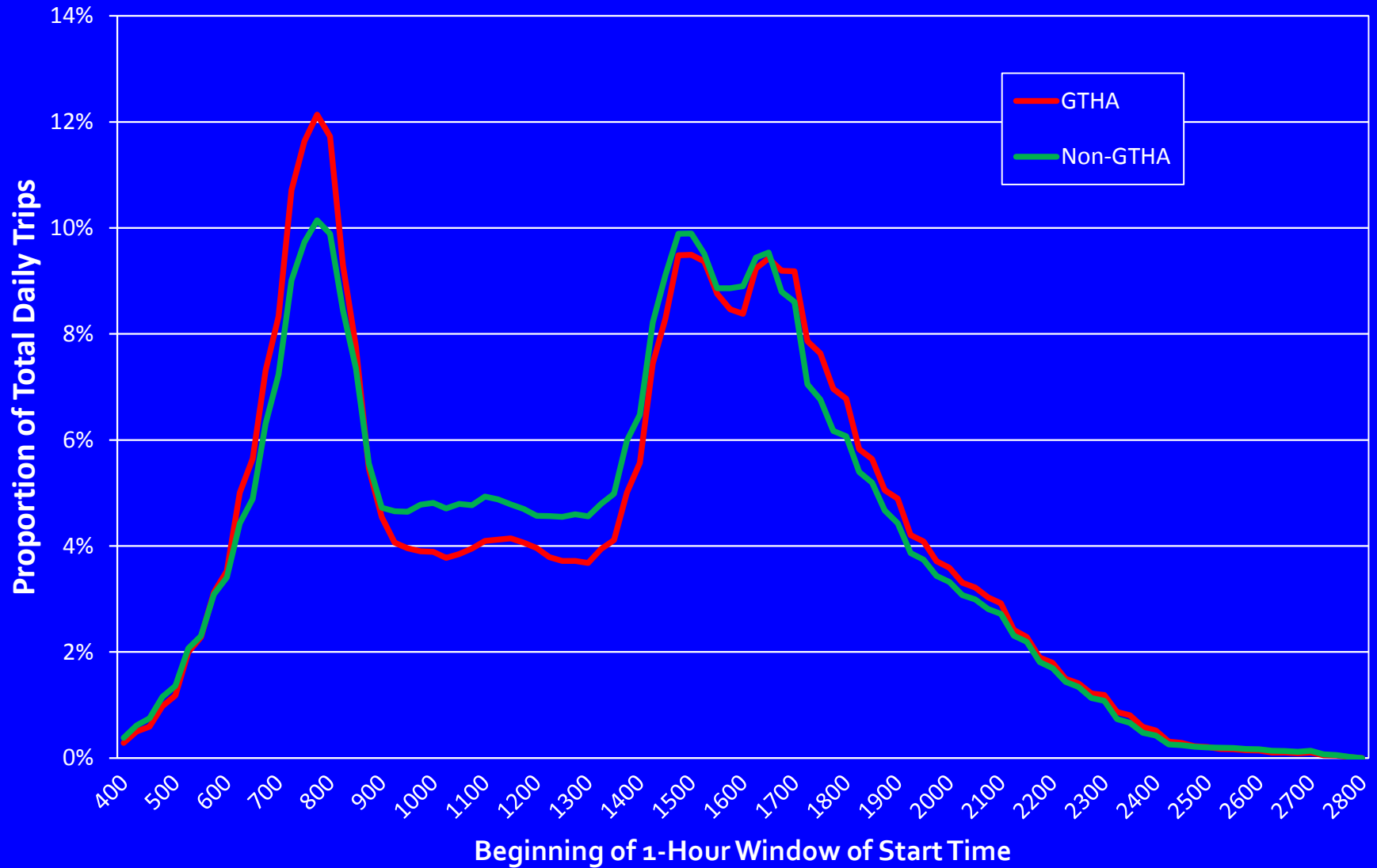
## Median Trip Length (Transit does not include GO Rail)



## First Trip to Work (Medium Trip Length)



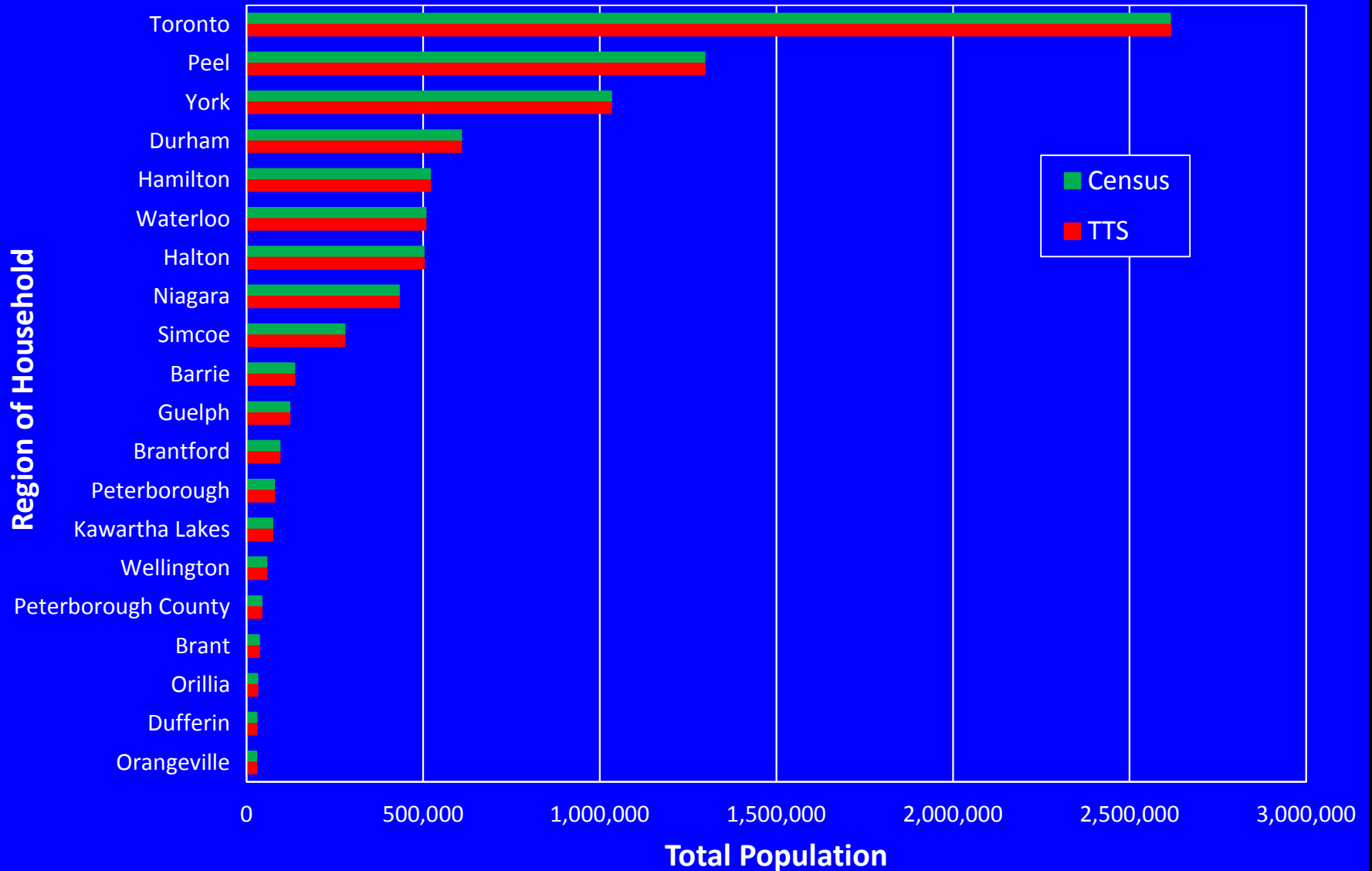
# Trip Start Time



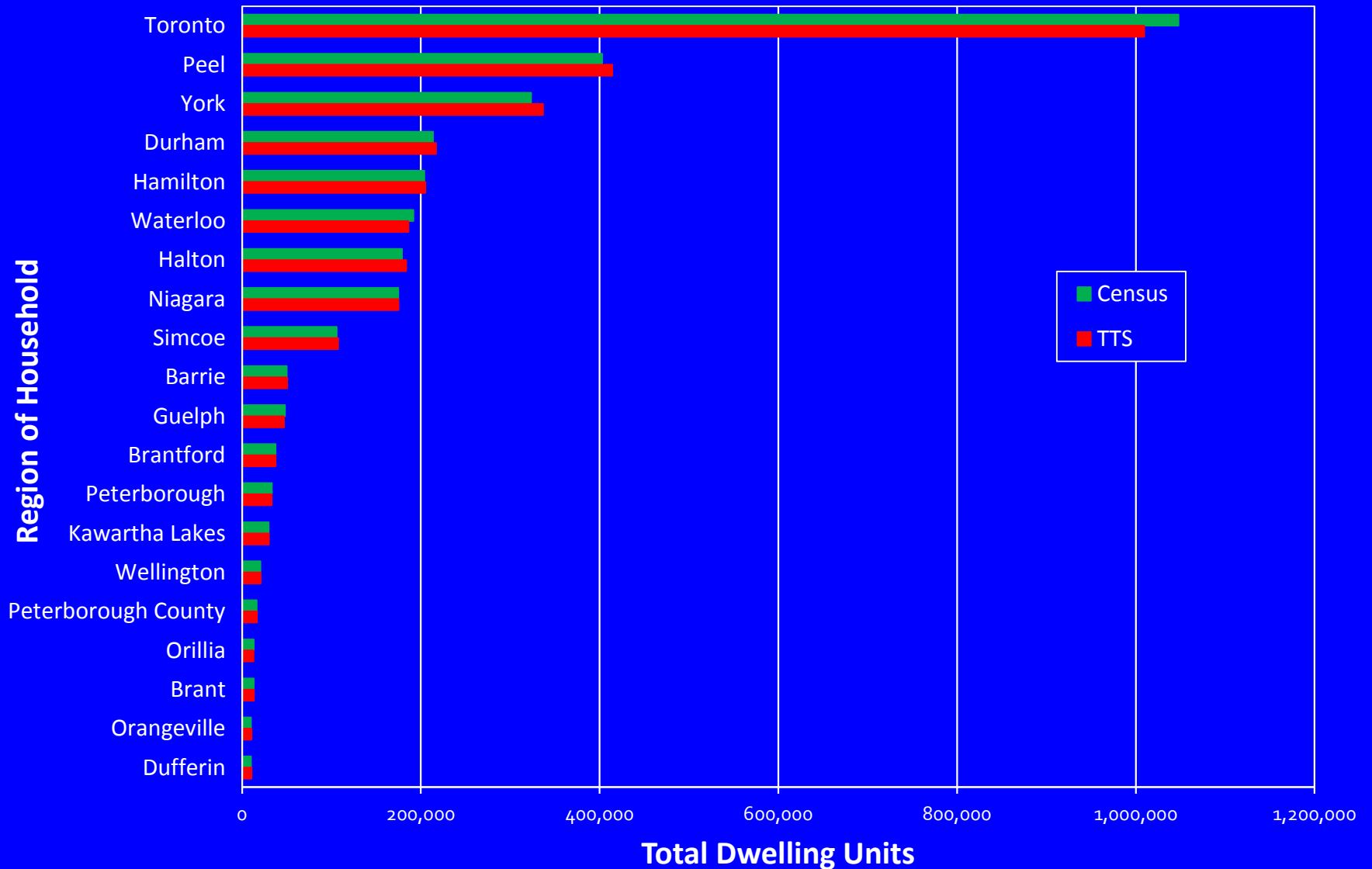
# 2011 TTS Data Validation



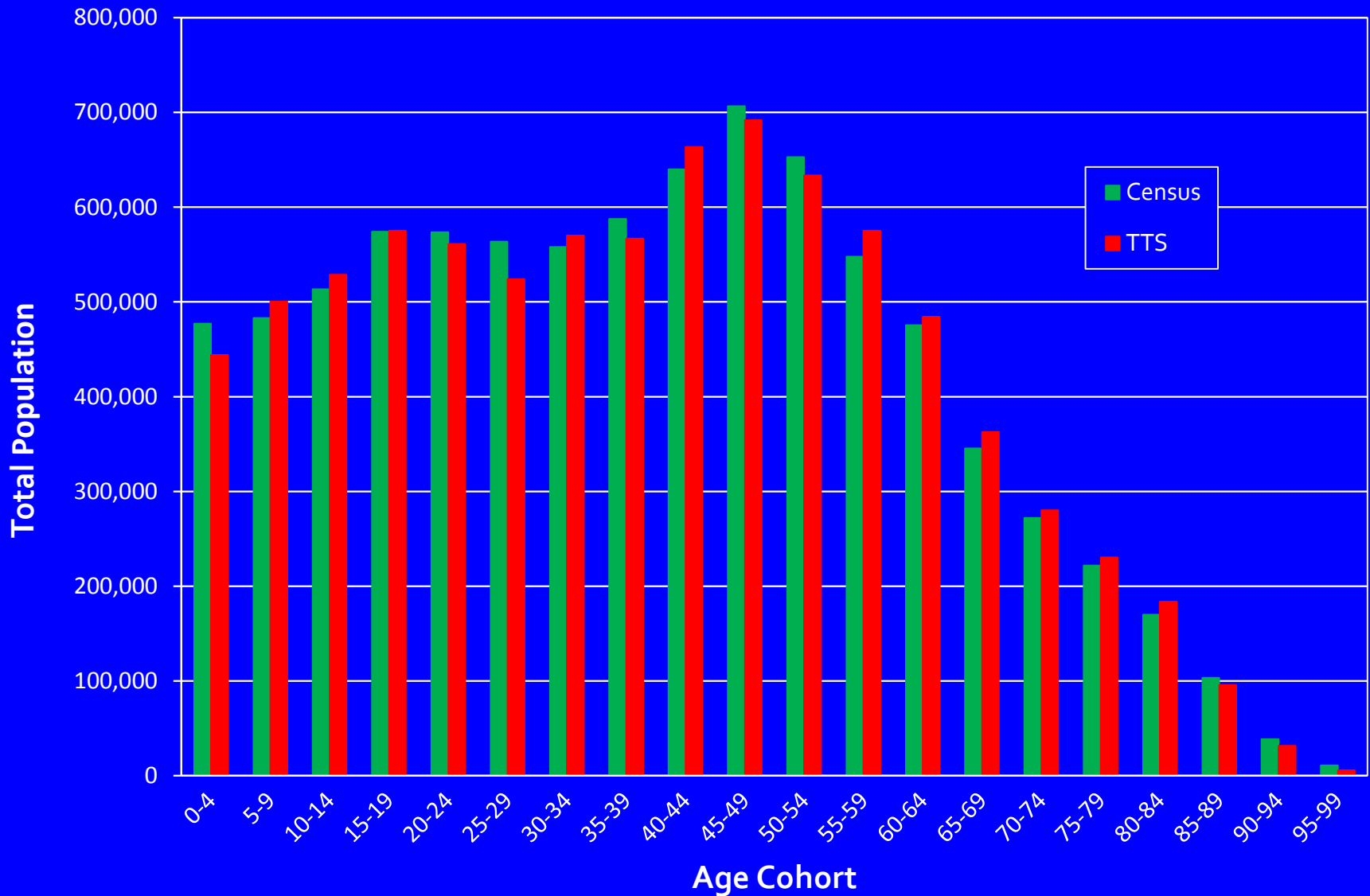
# 2011 Population



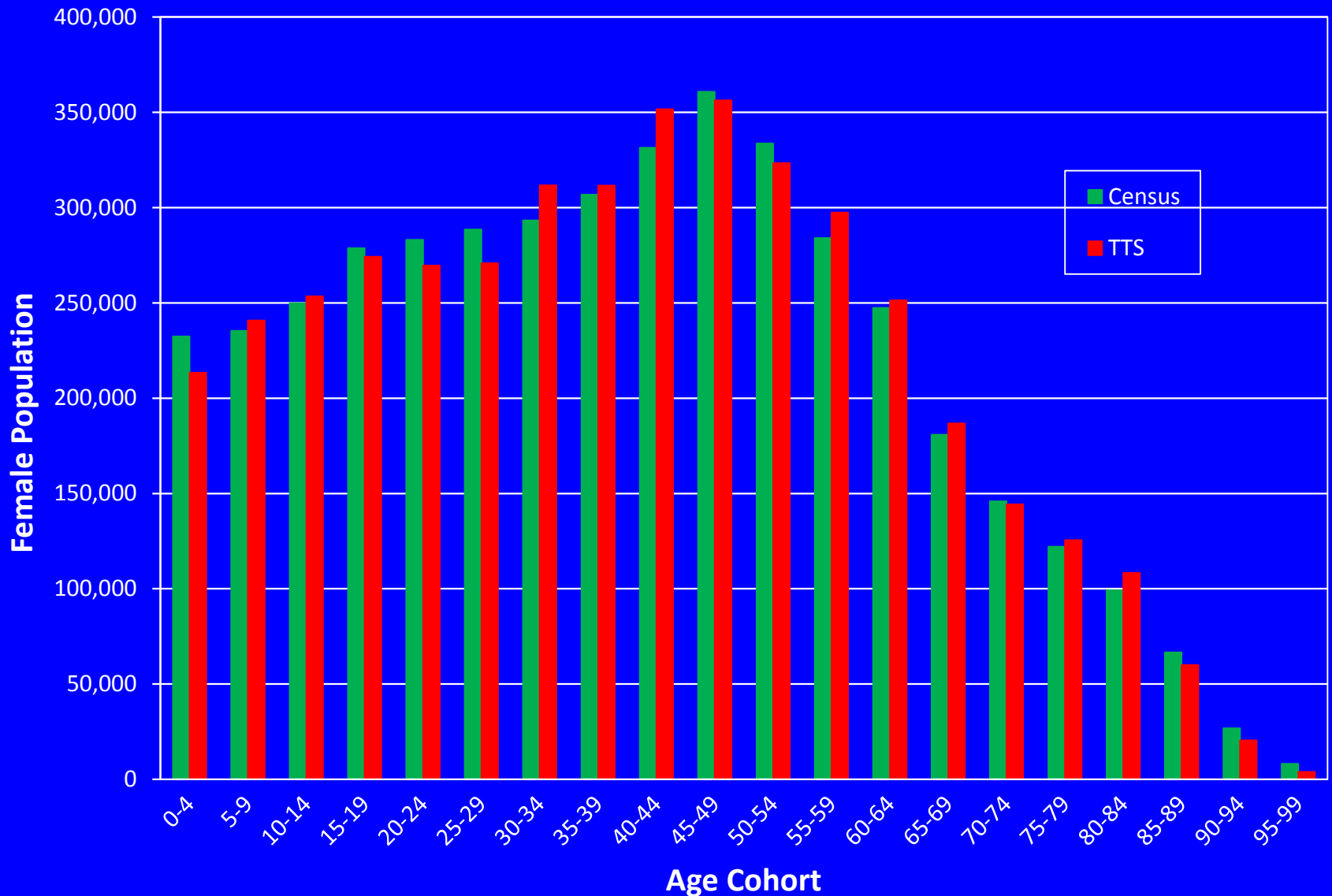
# 2011 Dwelling Units



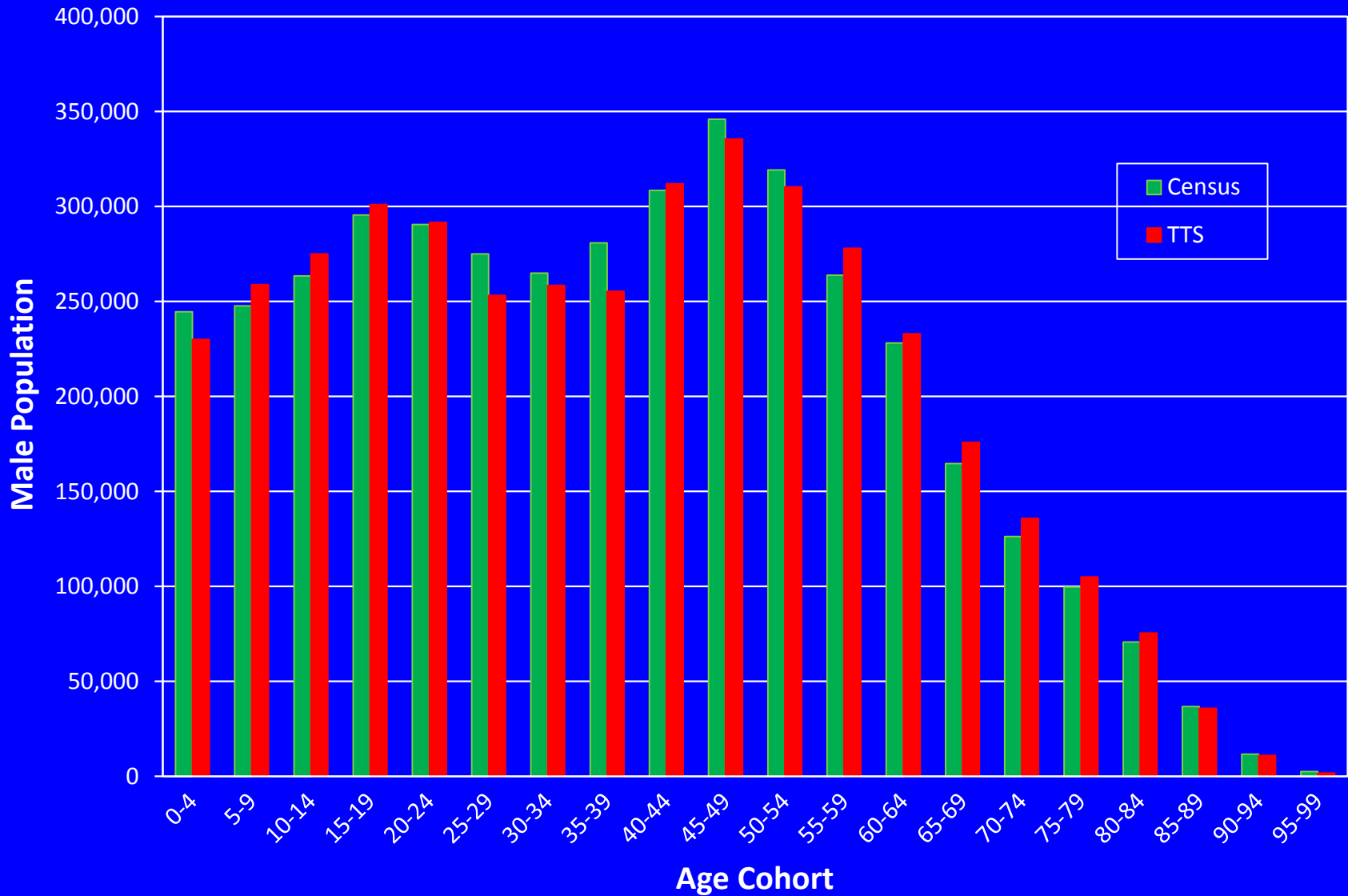
# Age Distribution



# Age Distribution – Female

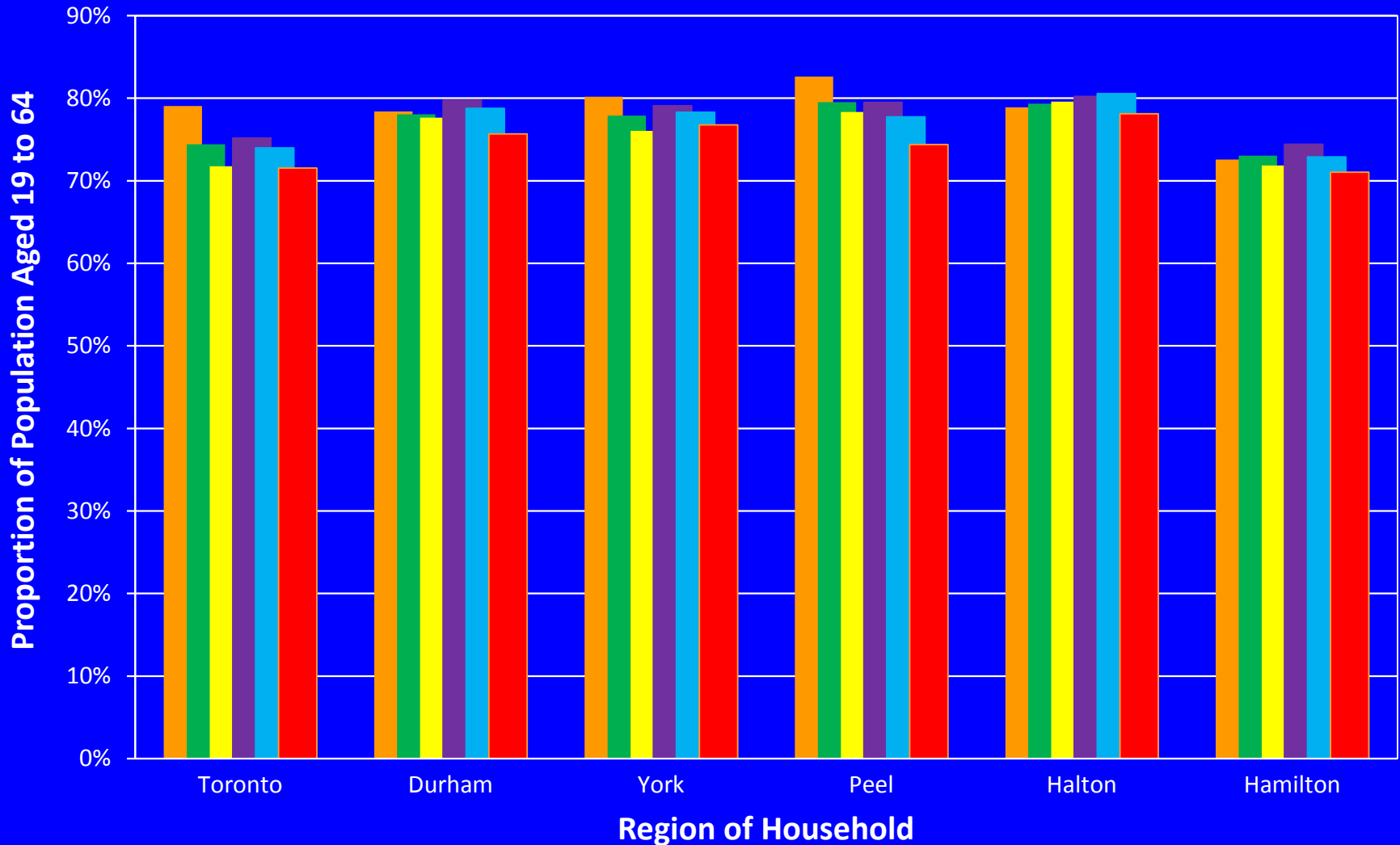


# Age Distribution - Male



# Employed Labour Force

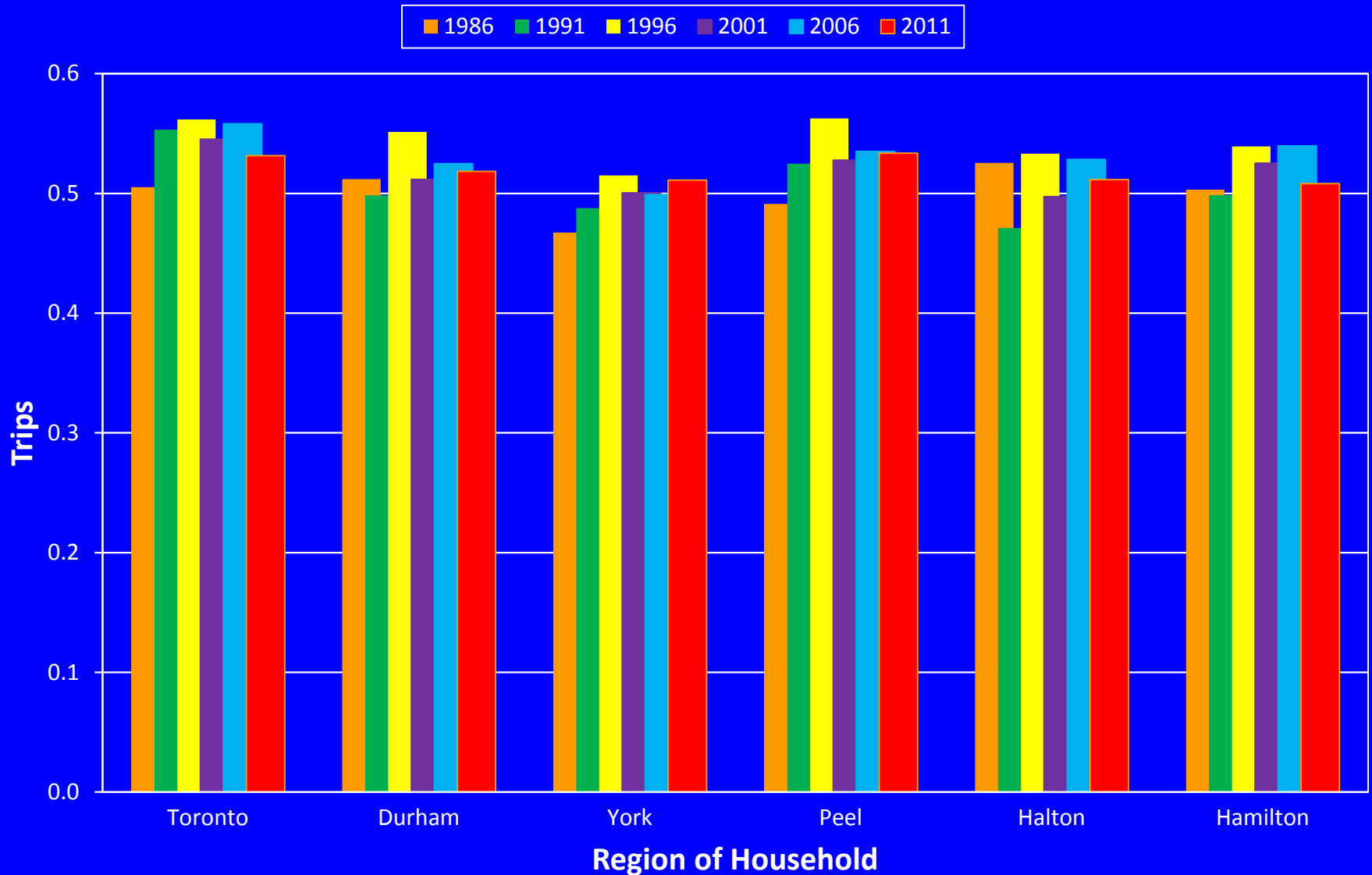
1986 1991 1996 2001 2006 2011



# Daily Trips to Work per Person (Employed Full-Time)

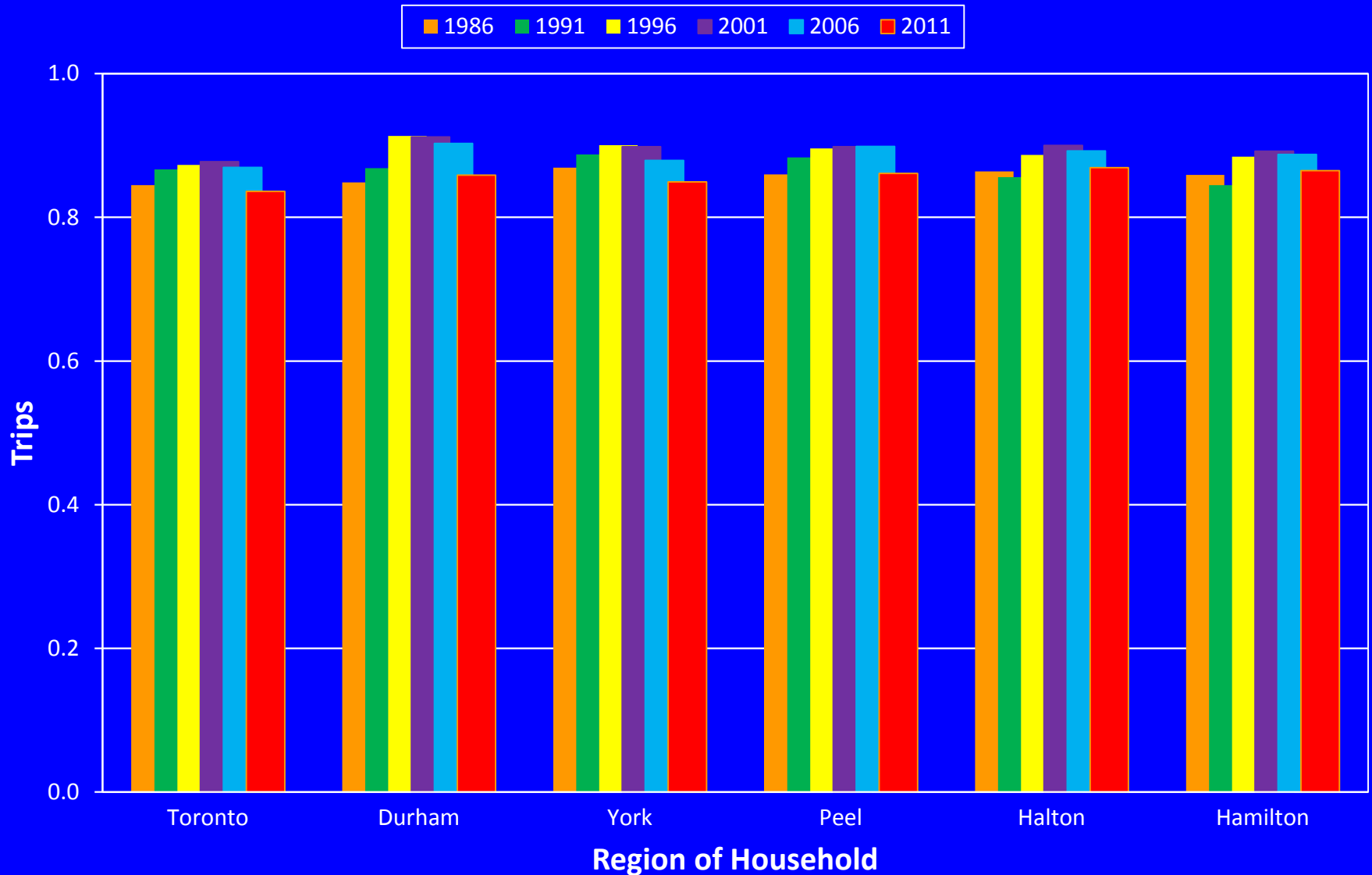


# Daily Trips to Work per Person (Employed Part-Time)





# Daily Trips to School (Full-Time Students)

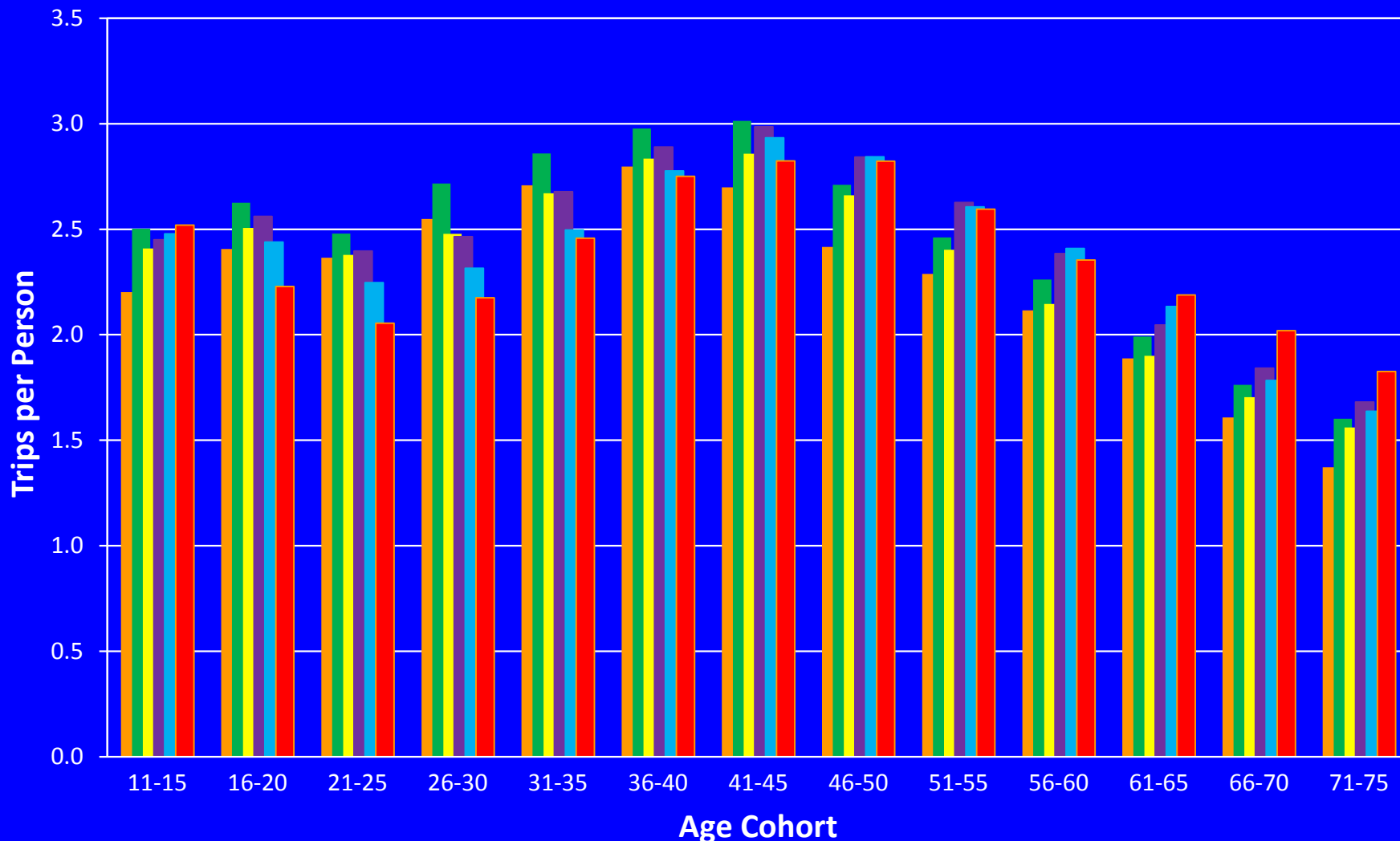


# Discretionary Travel

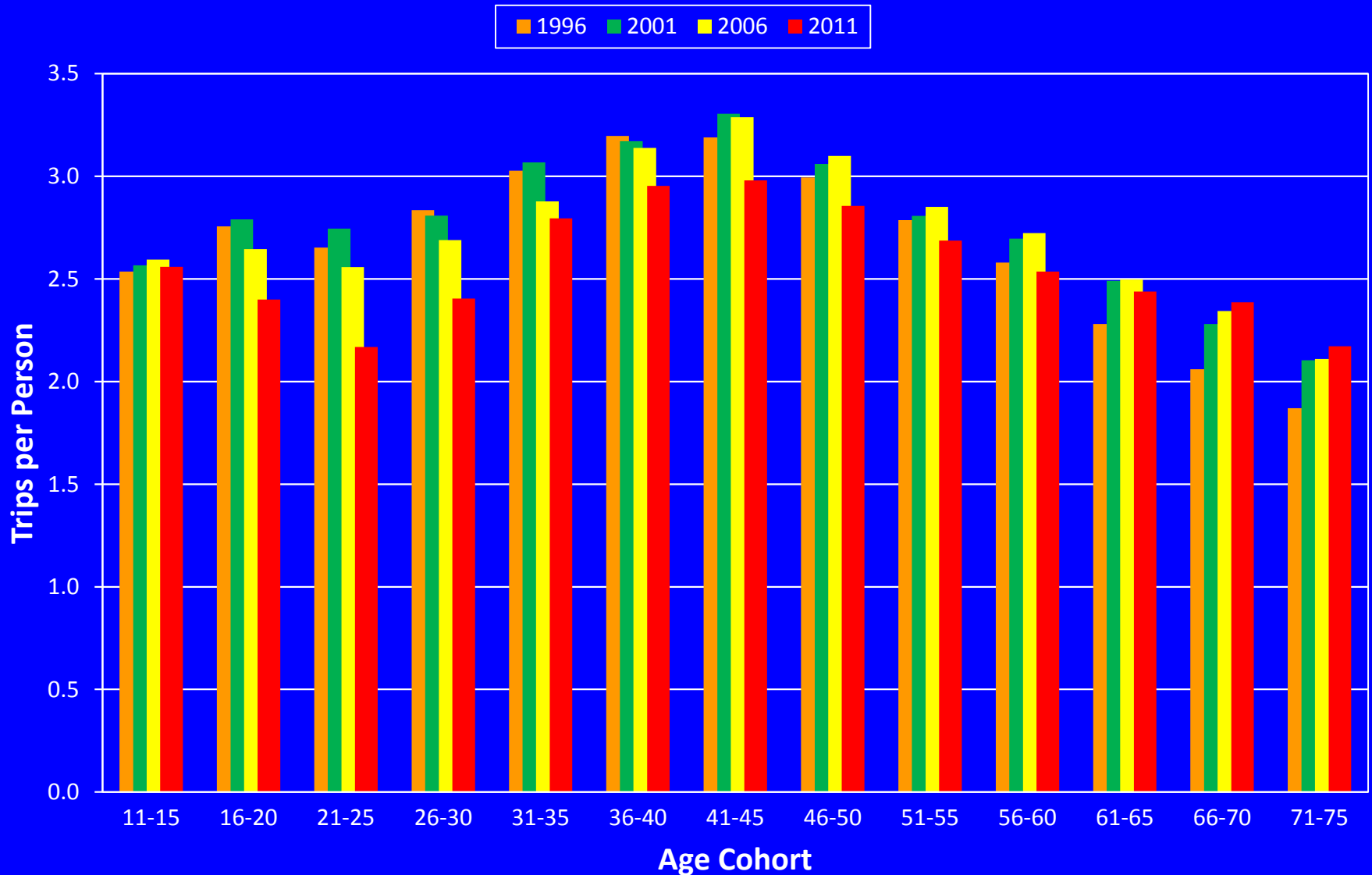


# Total Trip Rate: GTHA Residents

1986 1991 1996 2001 2006 2011

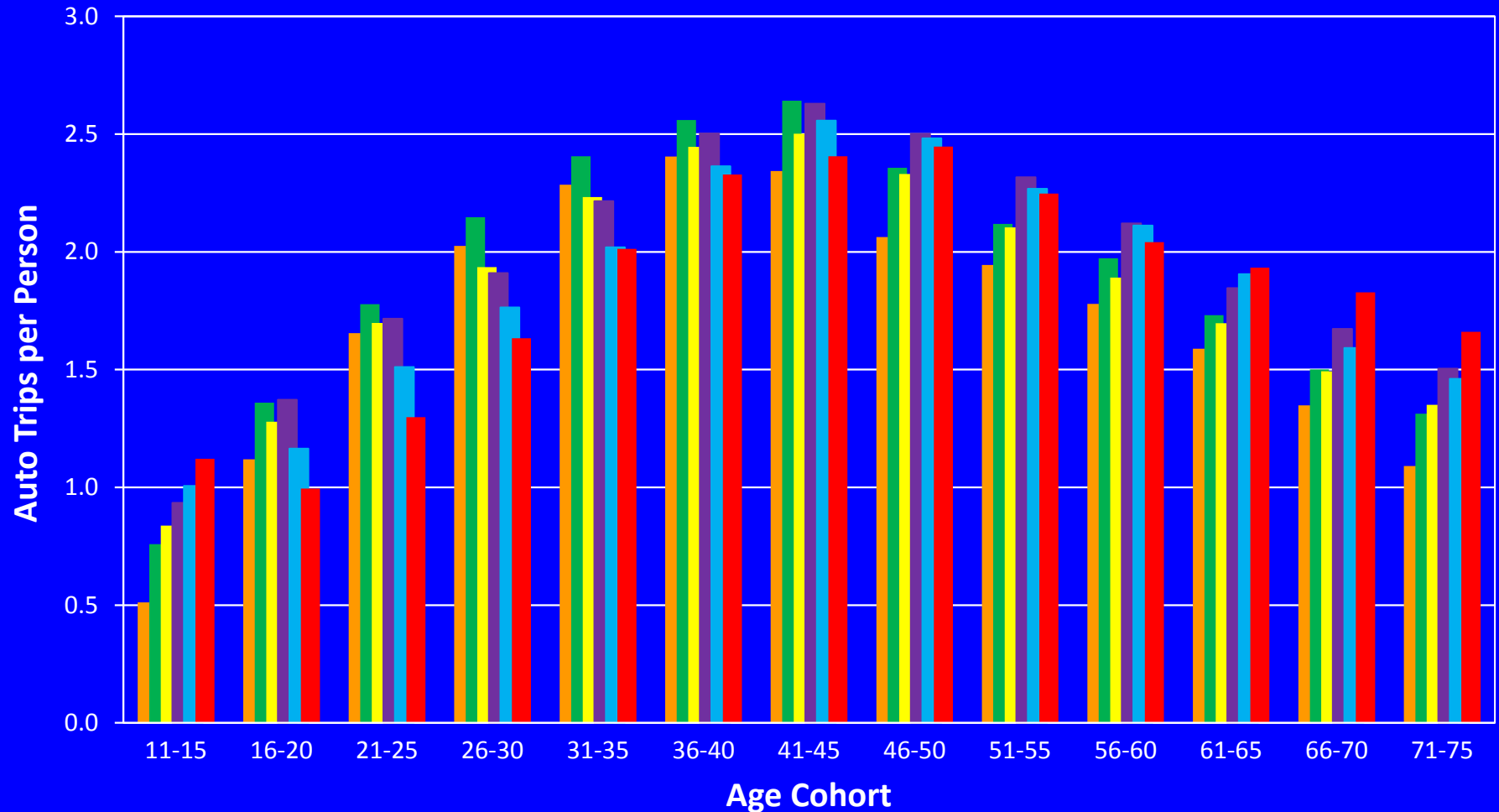


# Total Daily Trip Rate: Non-GTHA Residents

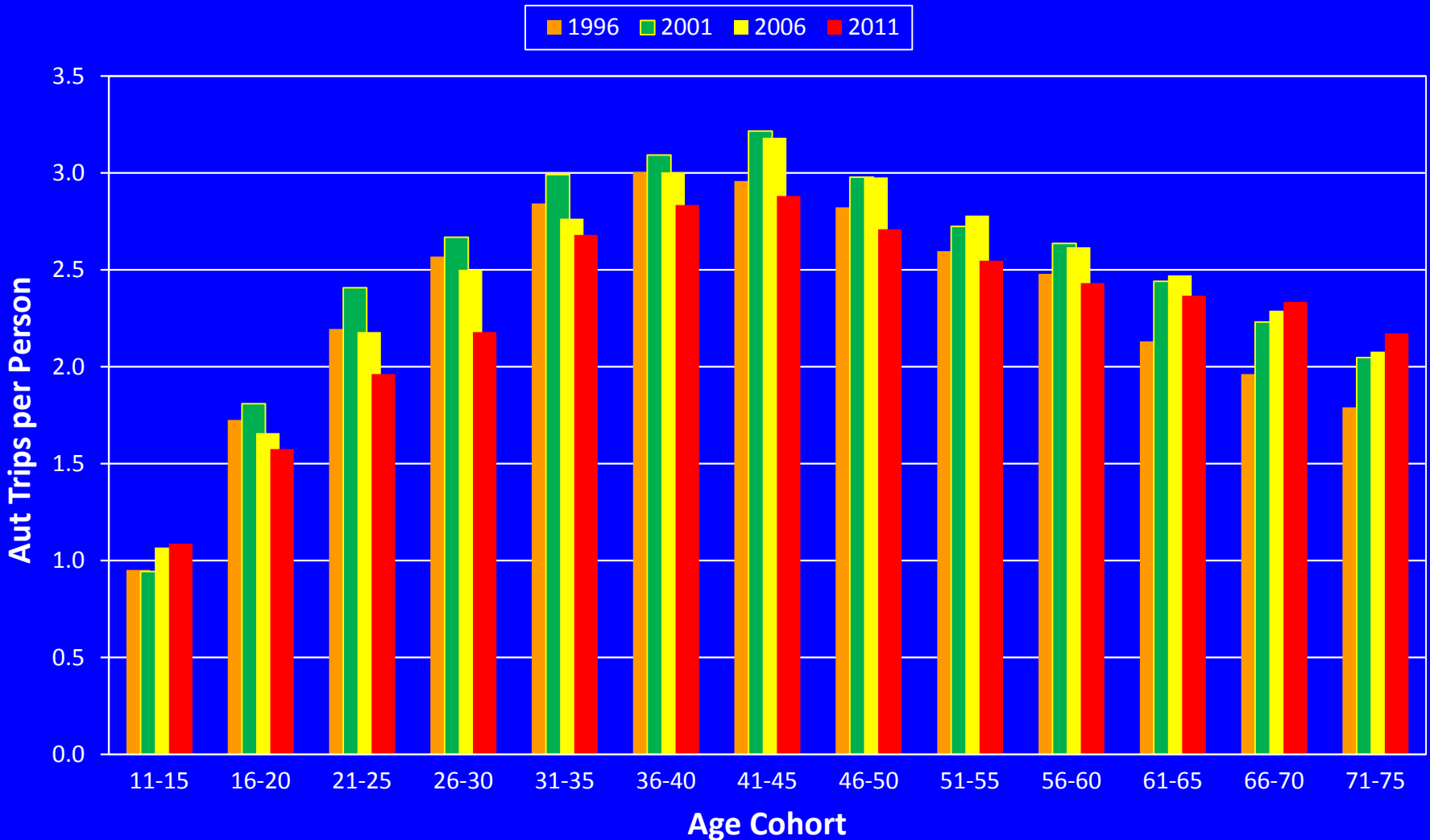


# Daily Auto Trip Rate (Driver and Passenger) GTHA Residents

1986 1991 1996 2001 2006 2011

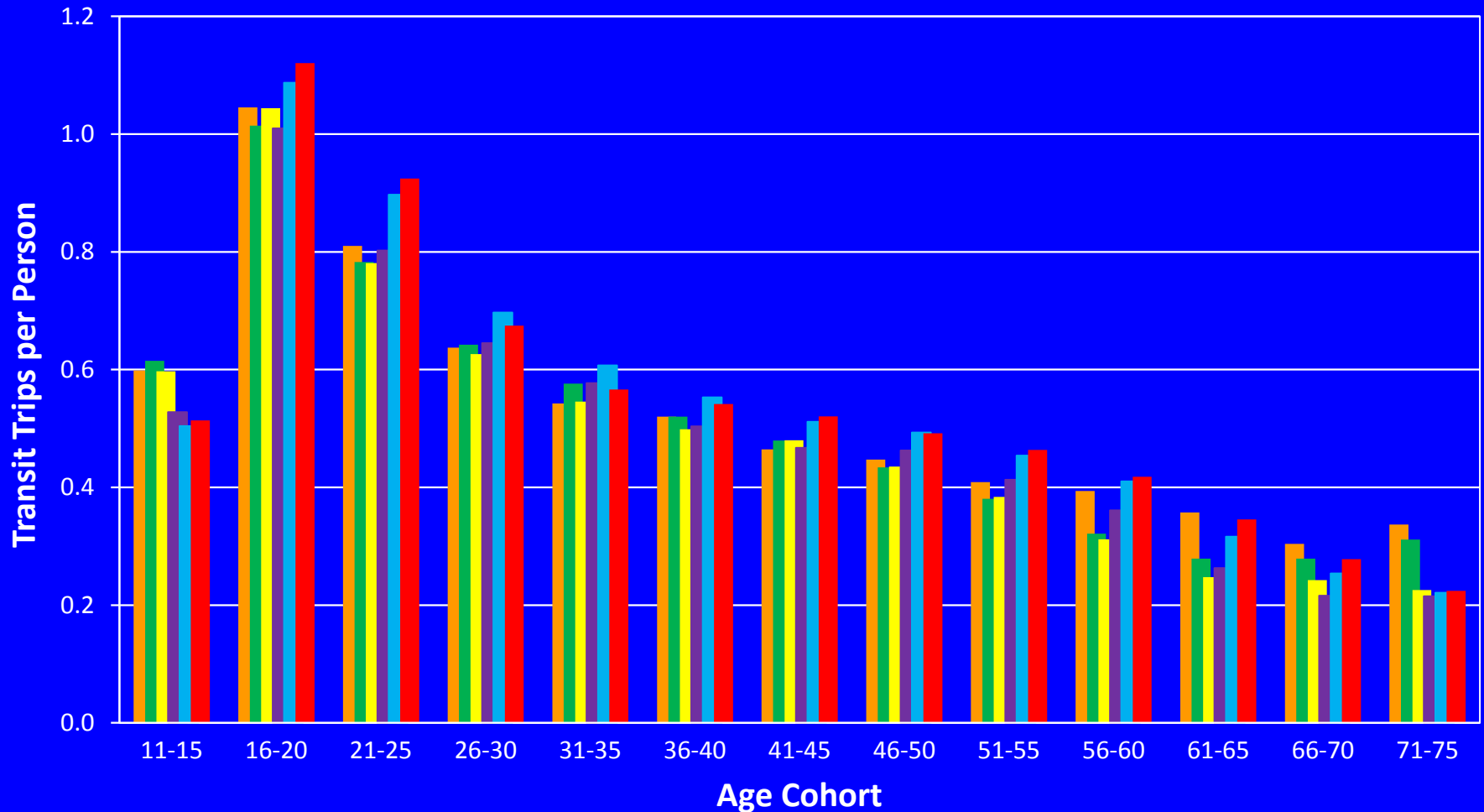


# Daily Auto Trip Rate (Driver and Passenger) Non-GTHA Residents



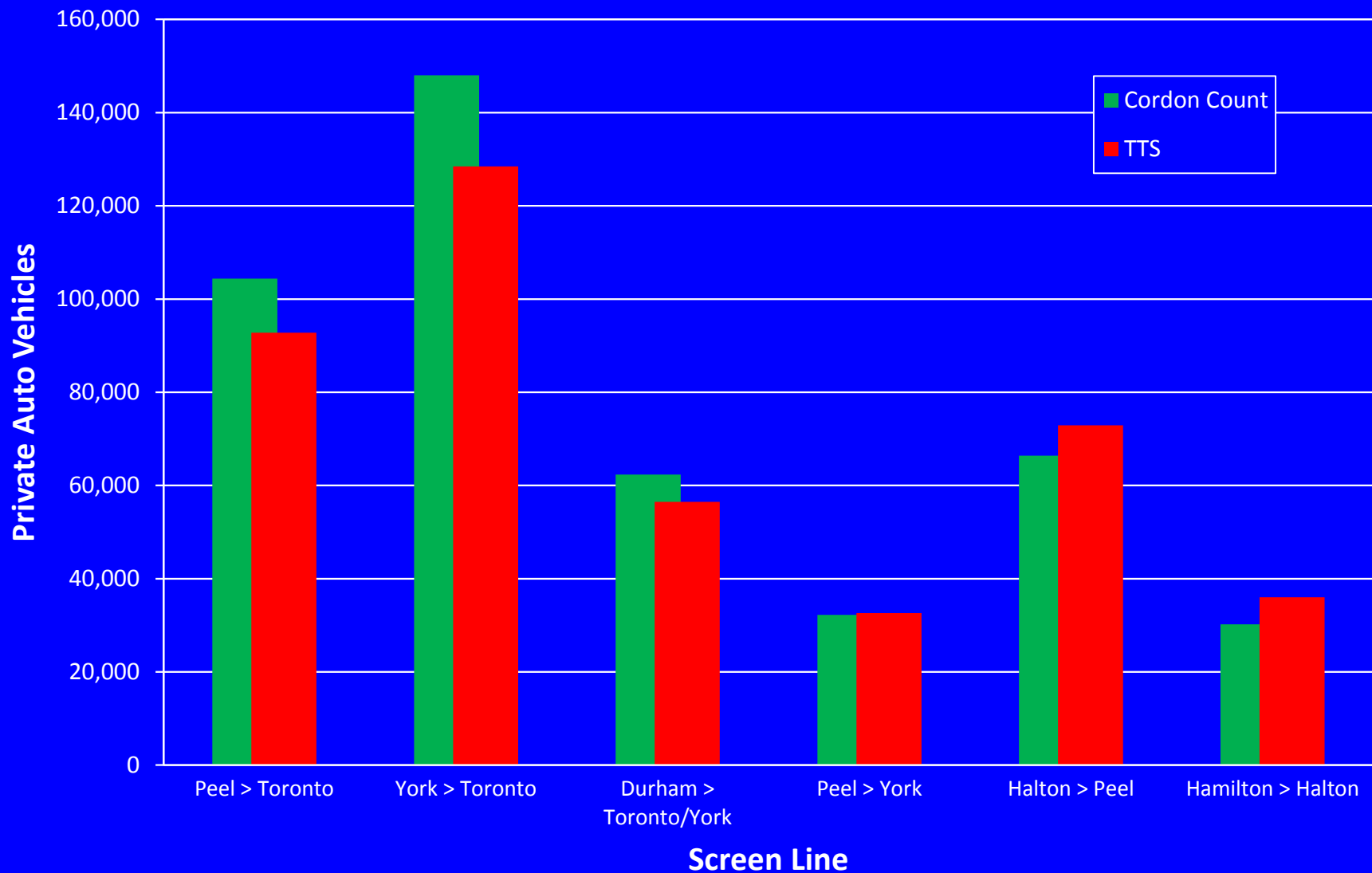
# Daily Transit Trip Rates (Including GO Rail) Toronto Residents

1986 1991 1996 2001 2006 2011



# Inbound Traffic Towards Toronto

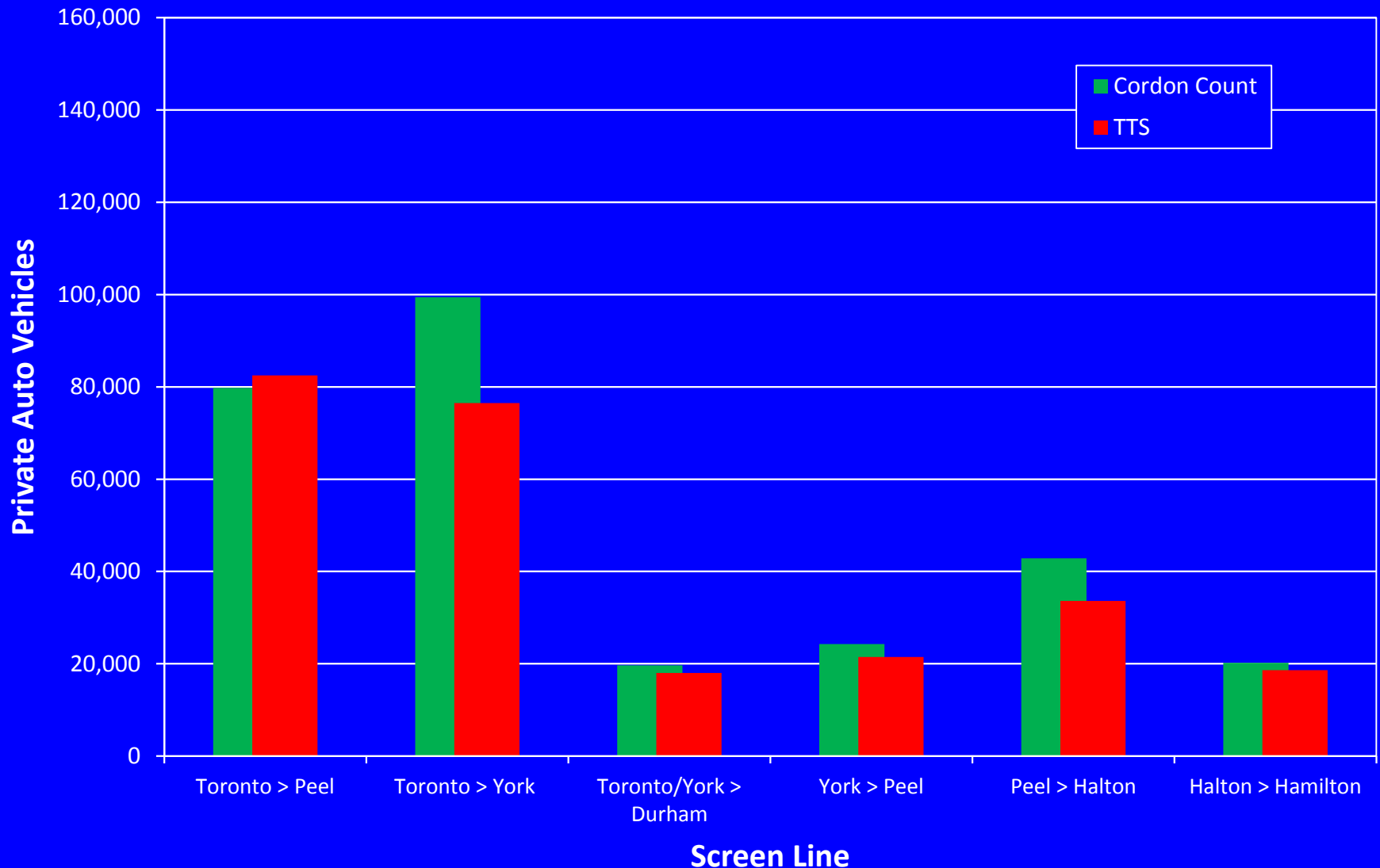
## AM Peak Period (6:15 a.m. to 8:15 a.m.)



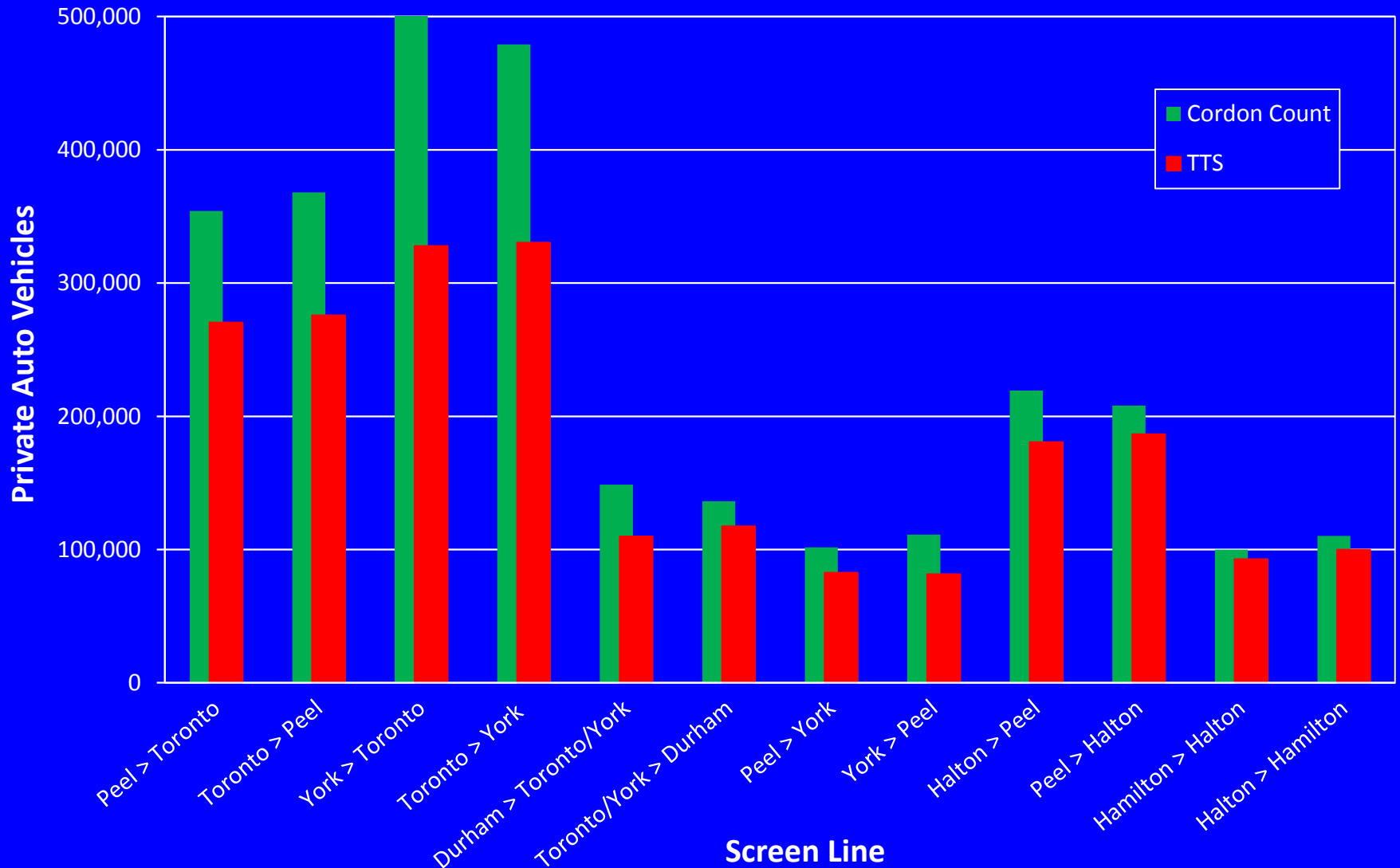


# Outbound Traffic Away from Toronto

AM Peak Period (6:15 a.m. to 9:15 a.m.)



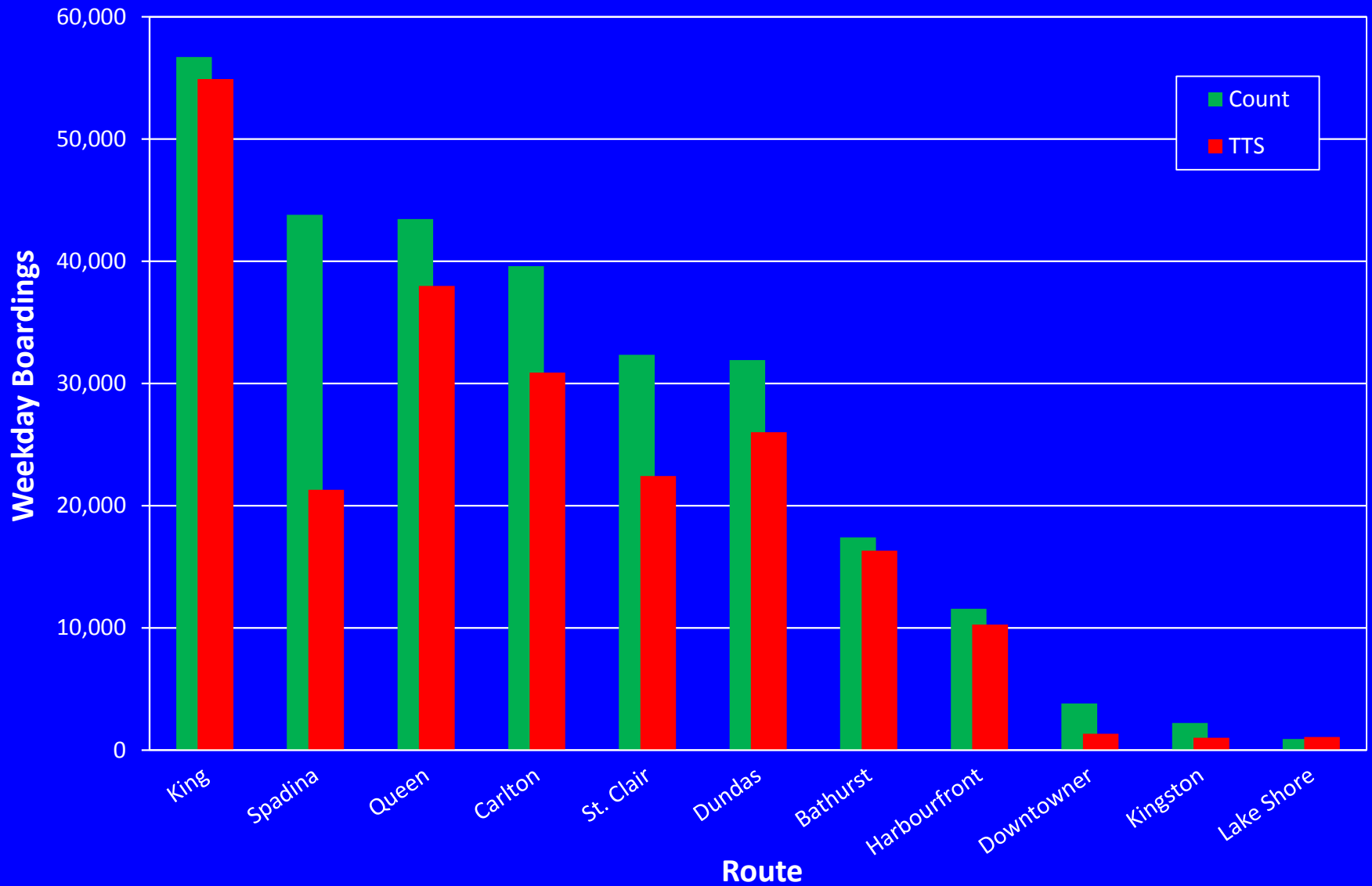
# 13 Hour Traffic Volumes (6:00 a.m. to 7:00 p.m.)



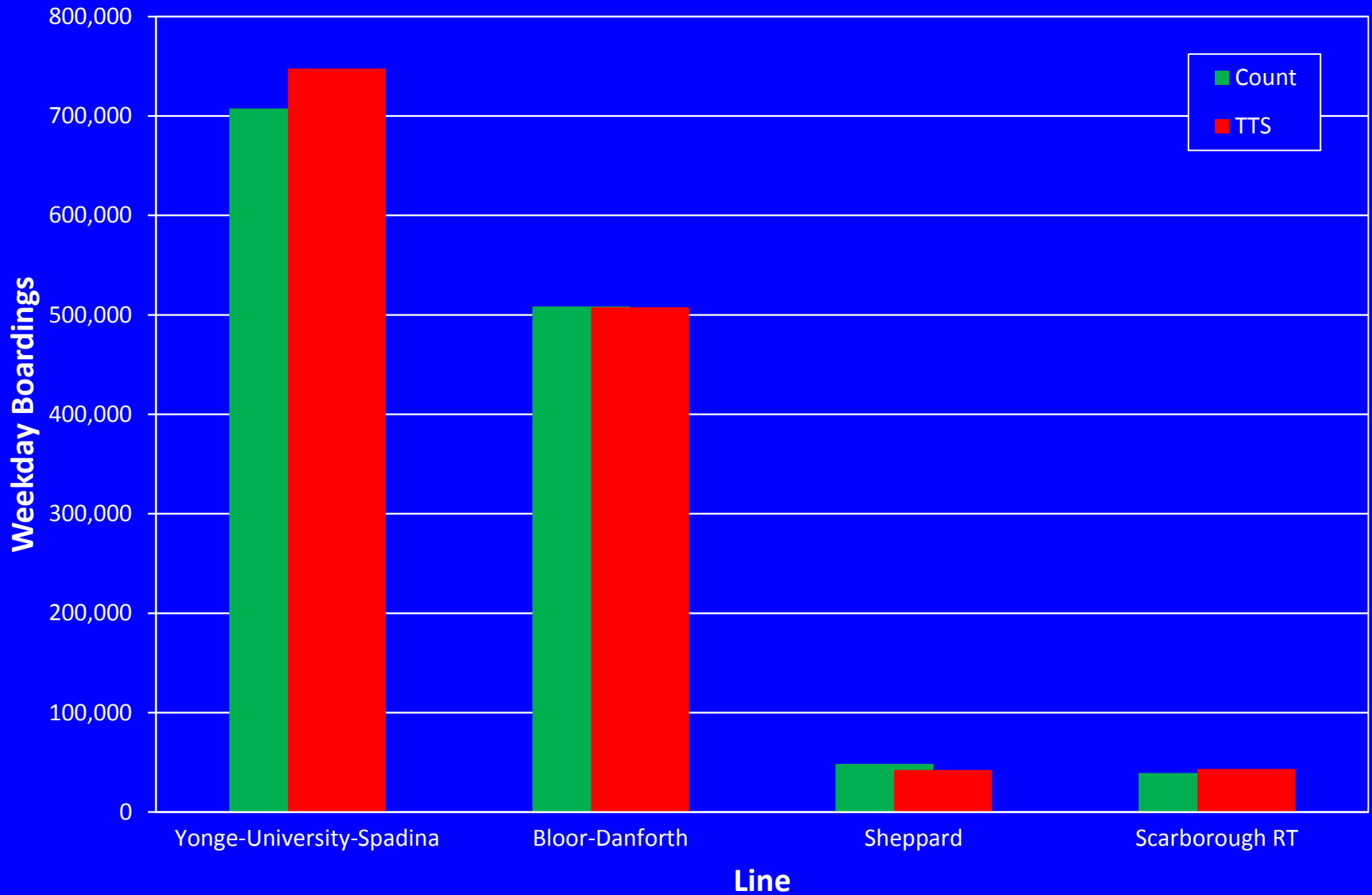
# TTC - 10 Busiest Bus Routes



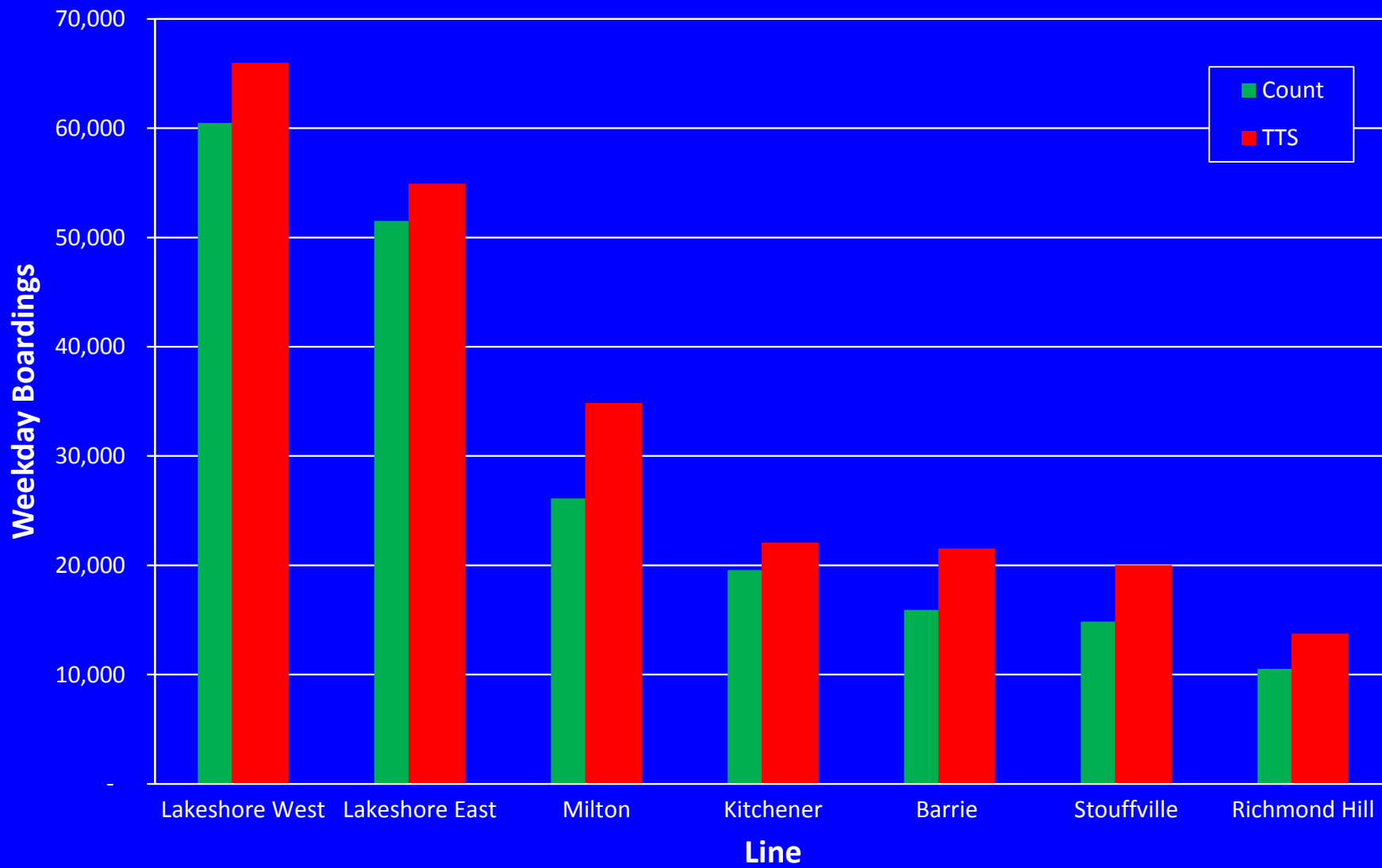
# TTC Streetcar



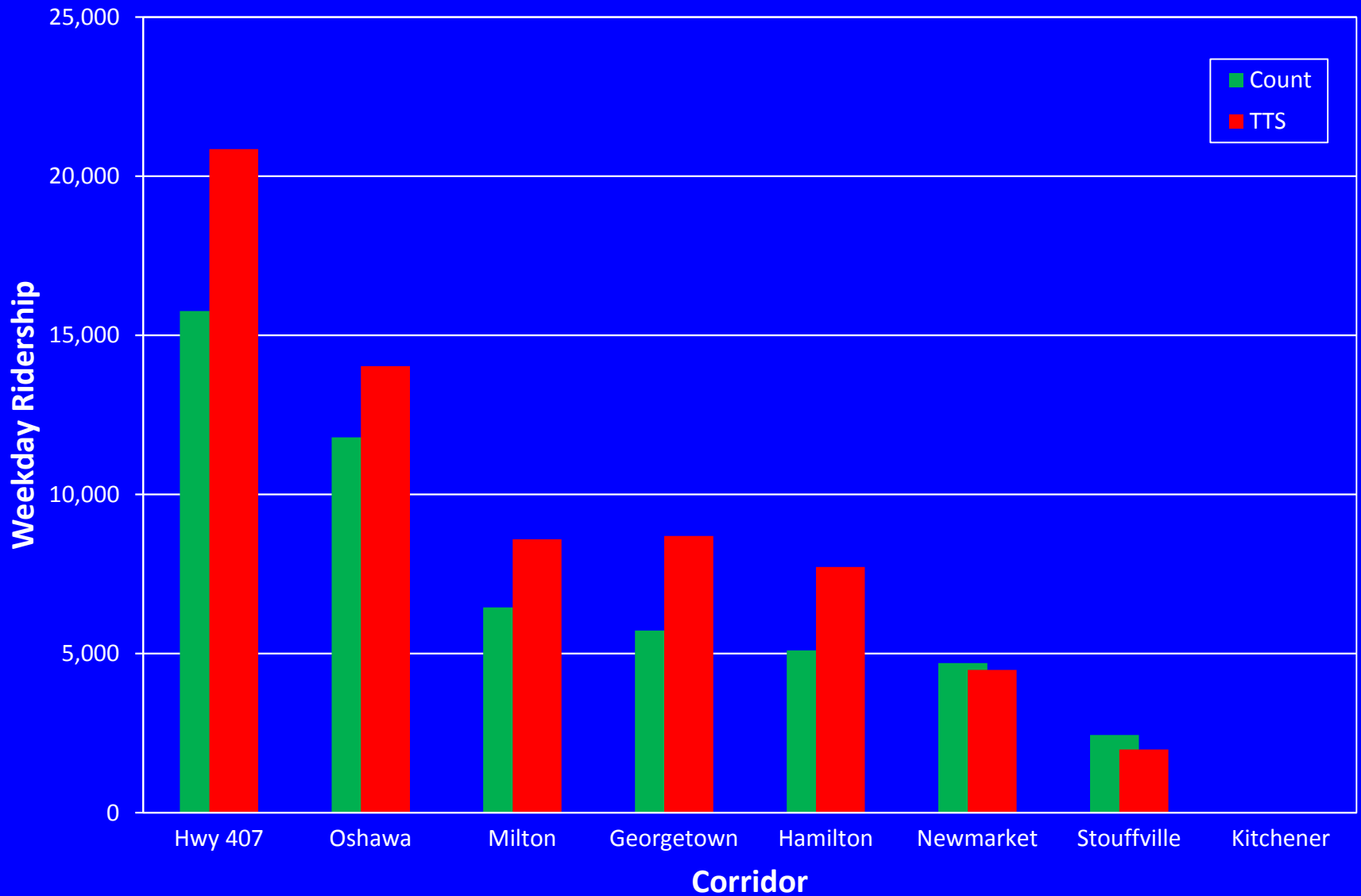
# TTC Subway Ridership



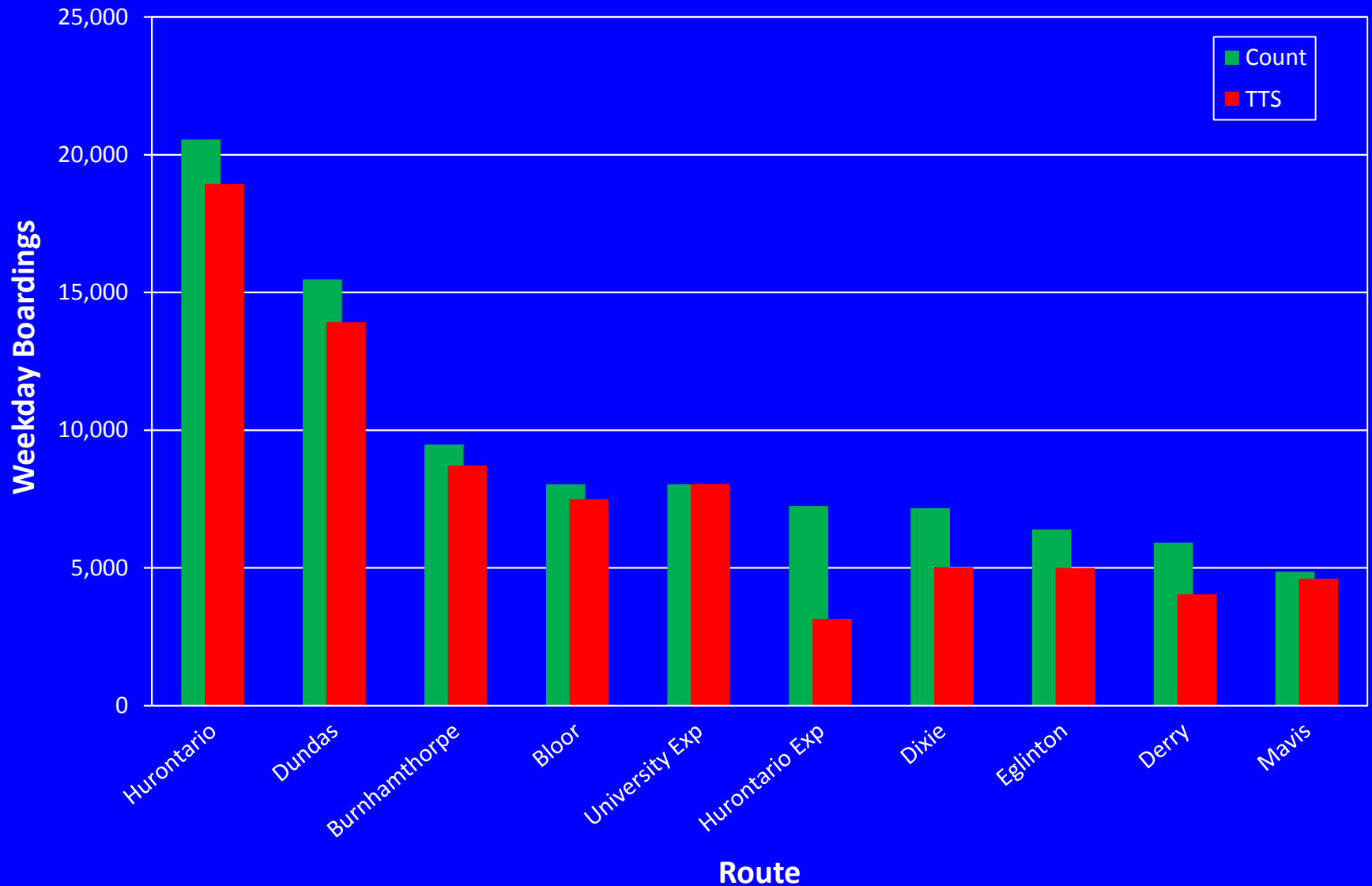
# GO Rail Ridership



# GO Bus Ridership

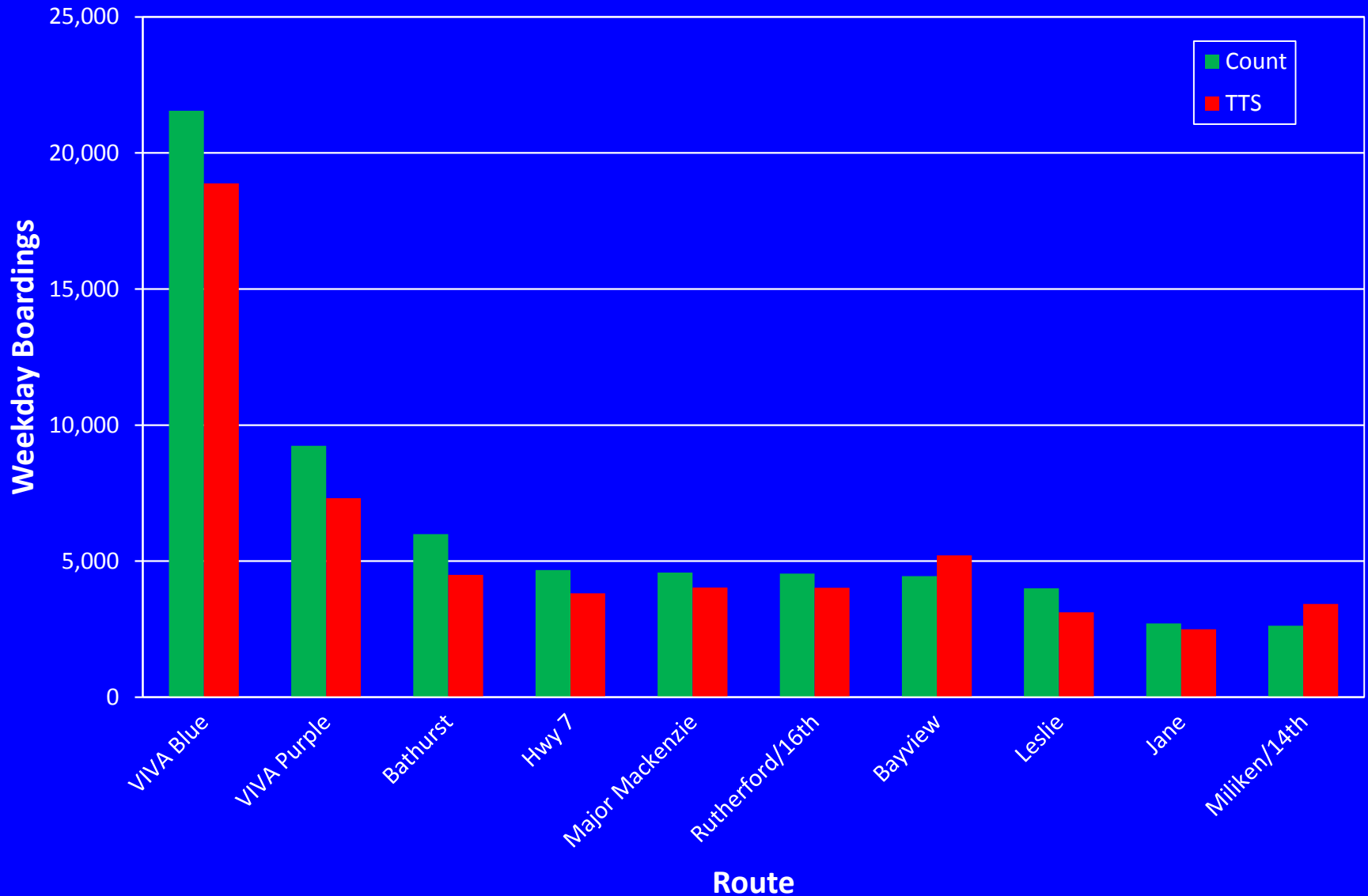


# Mississauga Transit - 10 Busiest Routes





# York Region Transit - 10 Busiest Routes

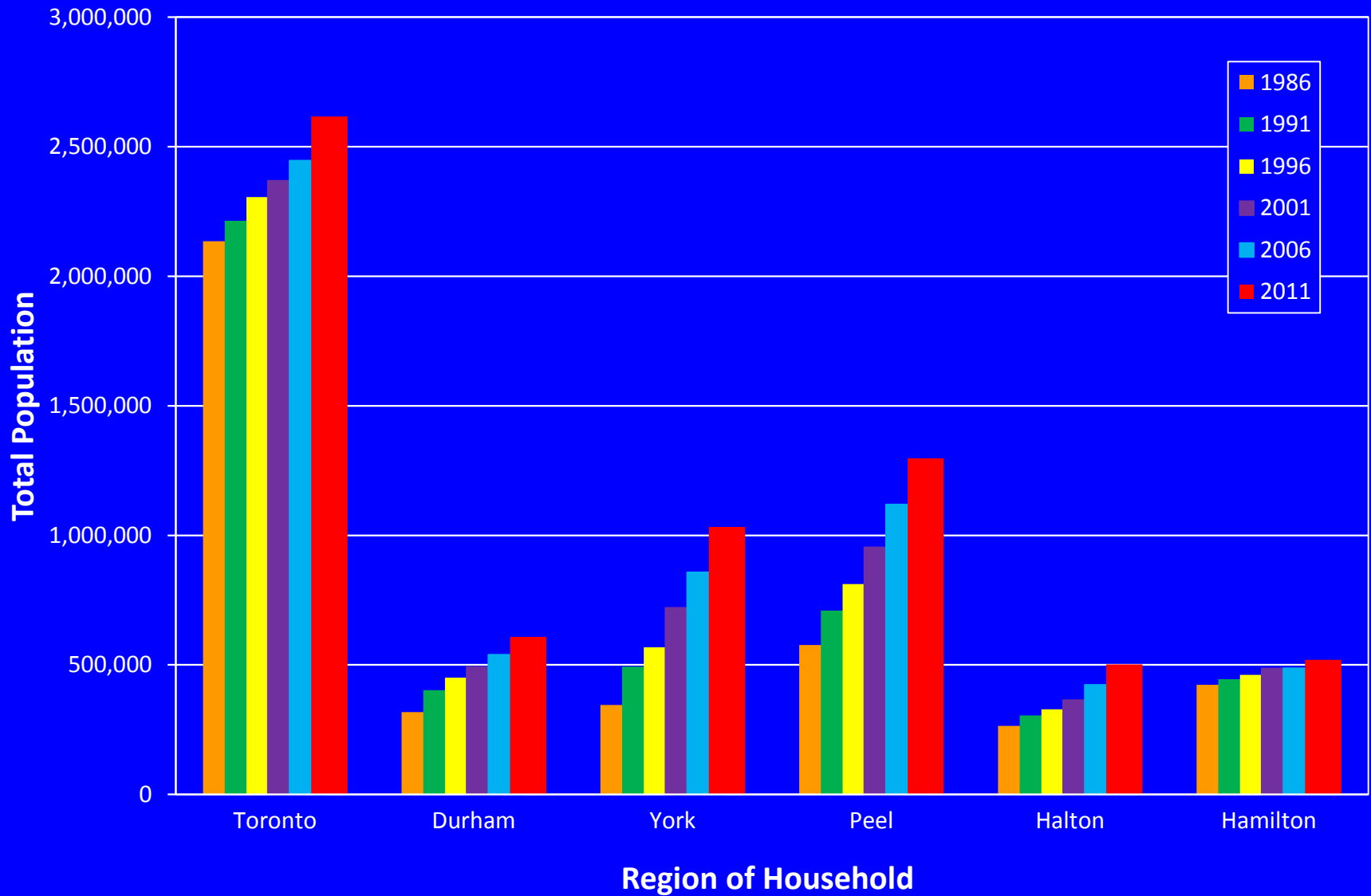


# Time Series Analysis

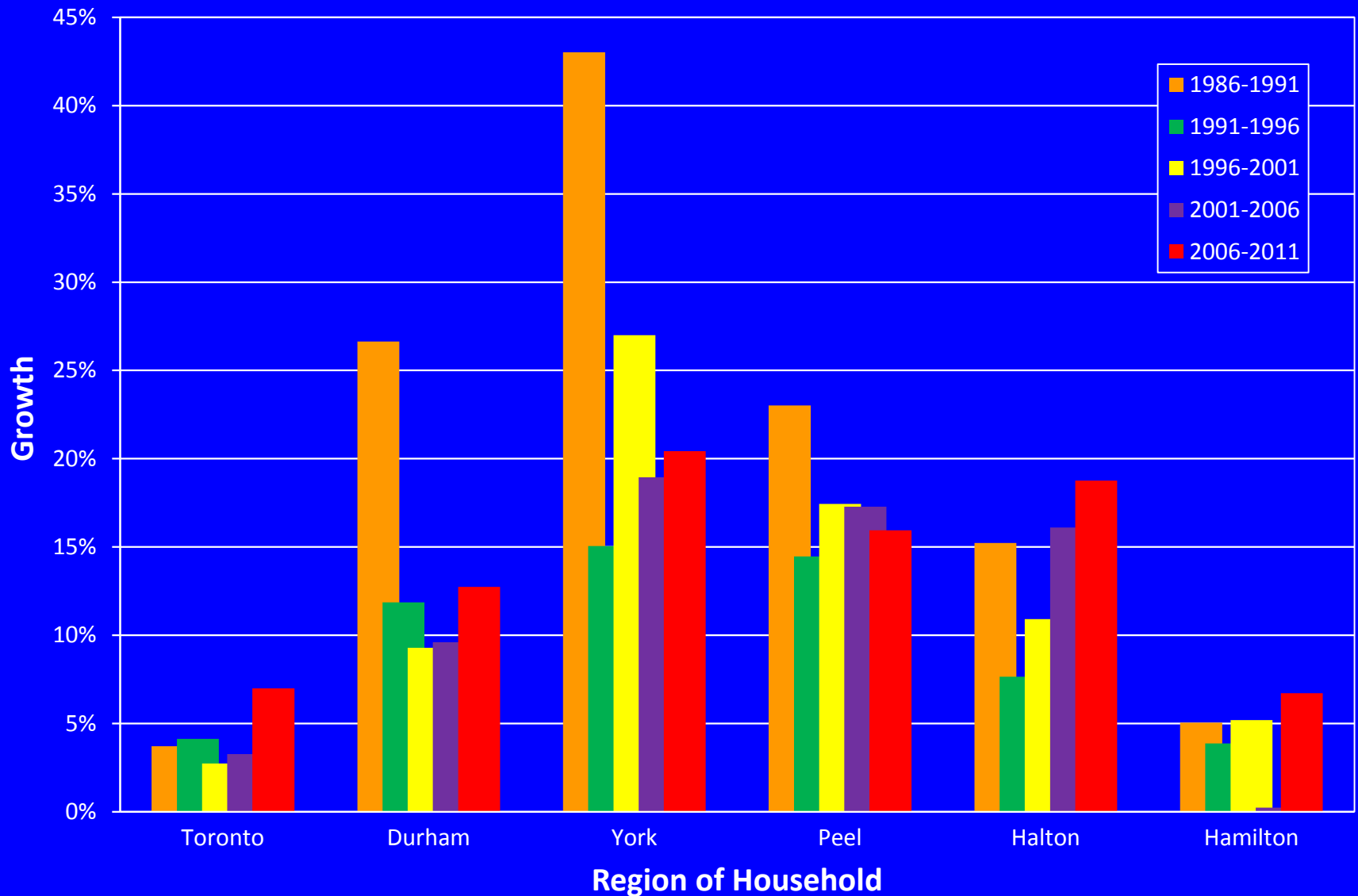
## GTHA

1986, 1991, 1996, 2001, 2006 and 2011

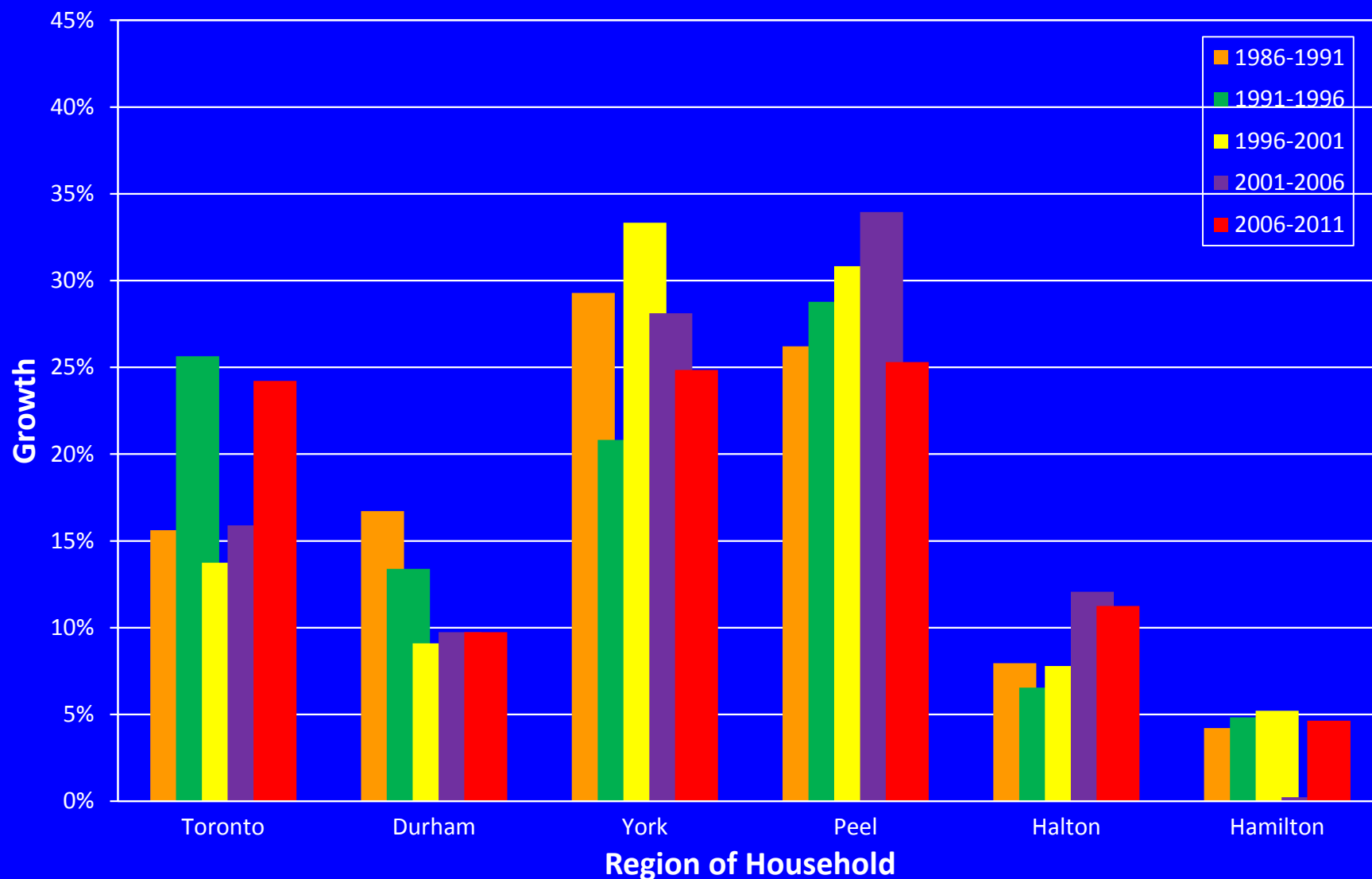
# Population



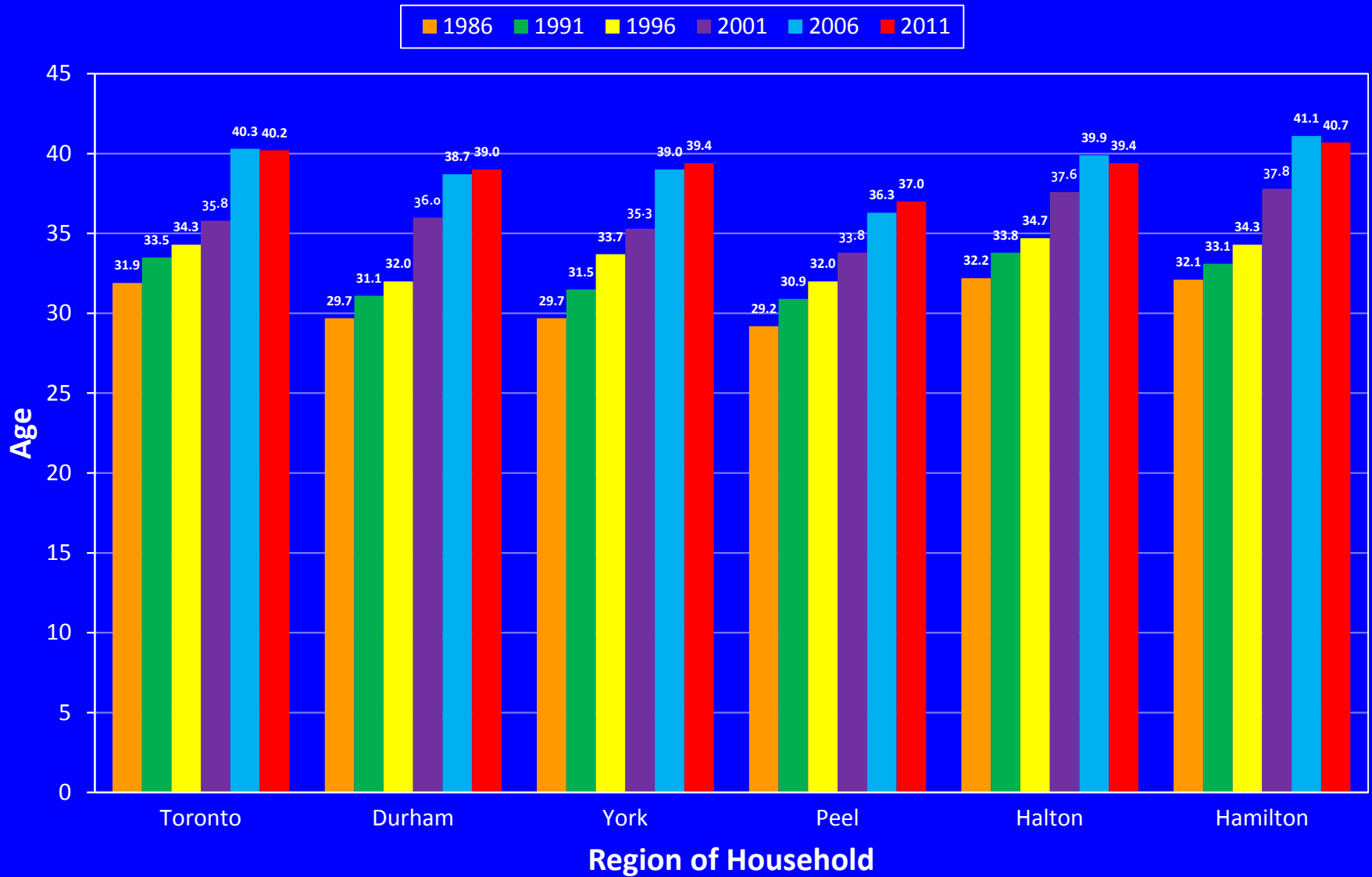
# 5-Year Population Growth



# 5-Year Population Growth (Proportion of Total GTHA Growth)

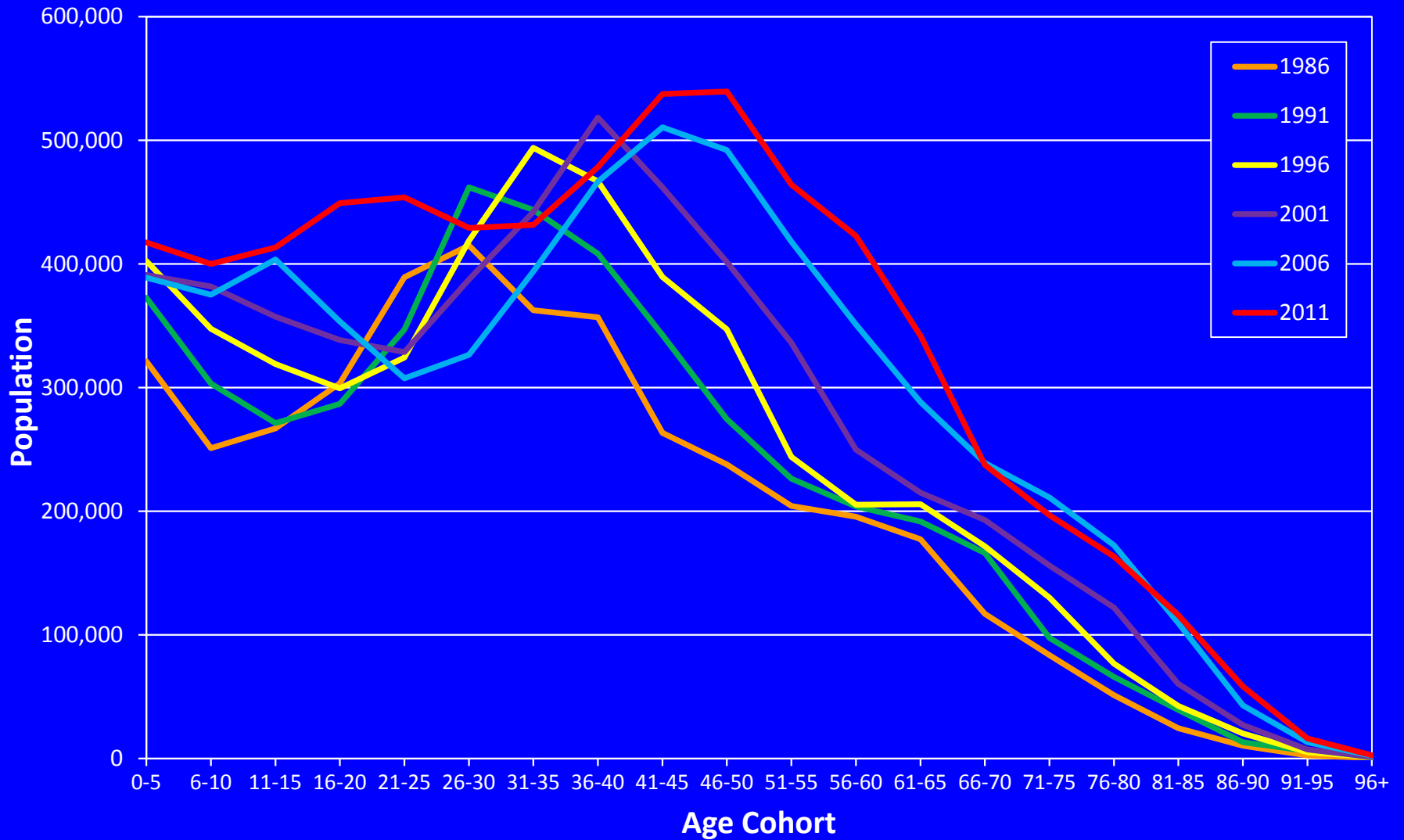


# Median Age



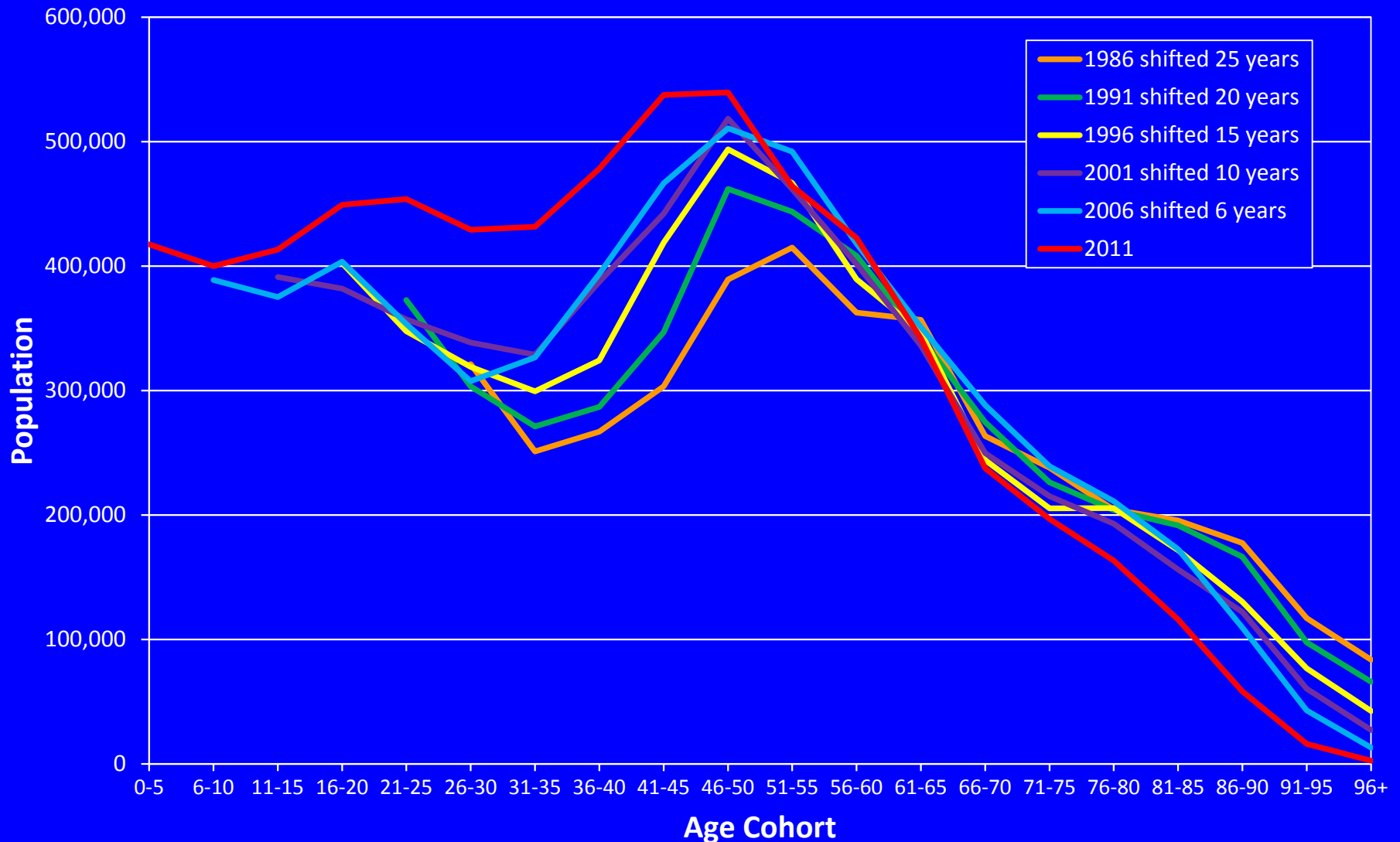
# Age Distribution

## GTHA Residents



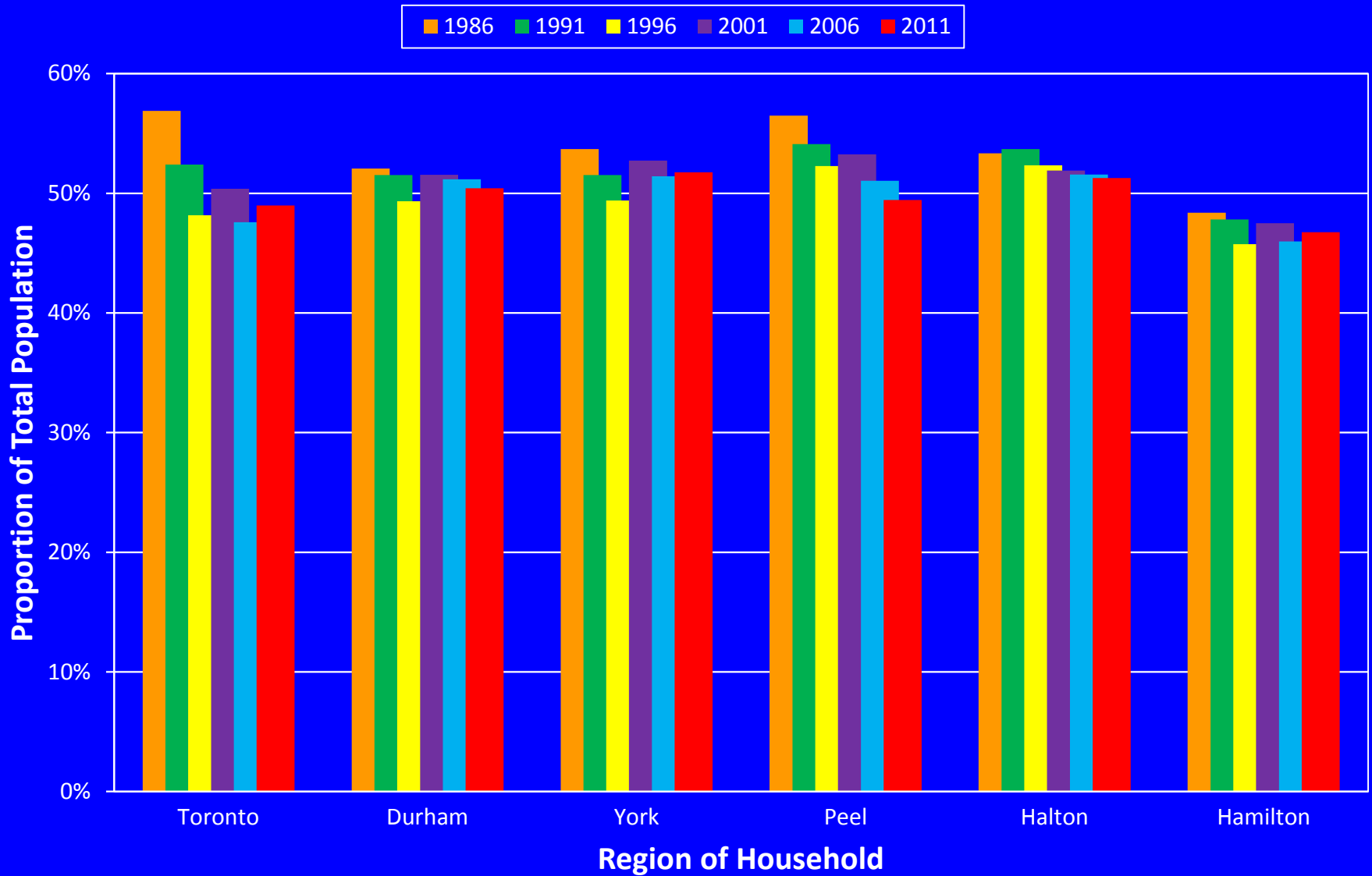
# Age Distribution

## GTHA Residents

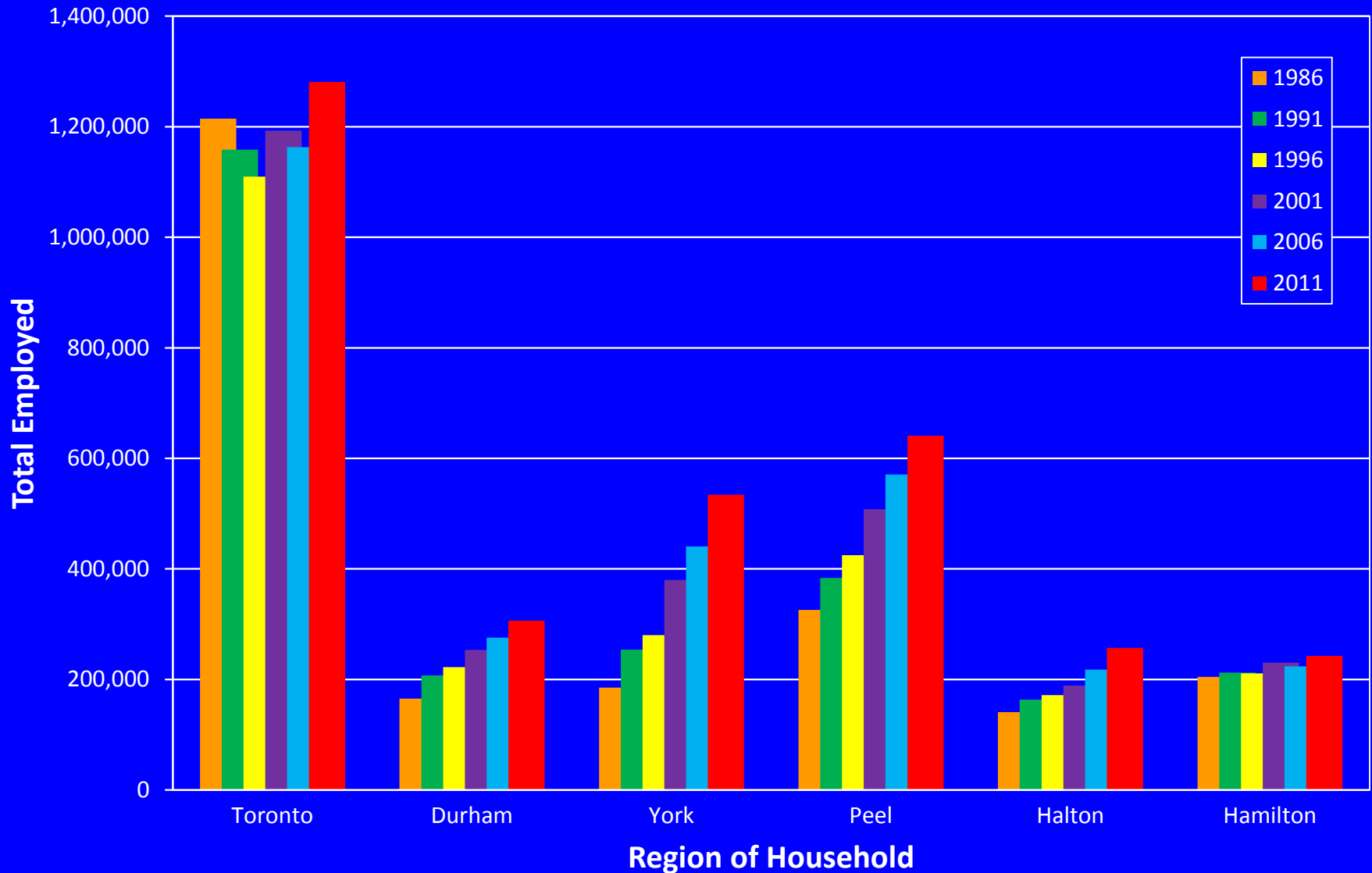




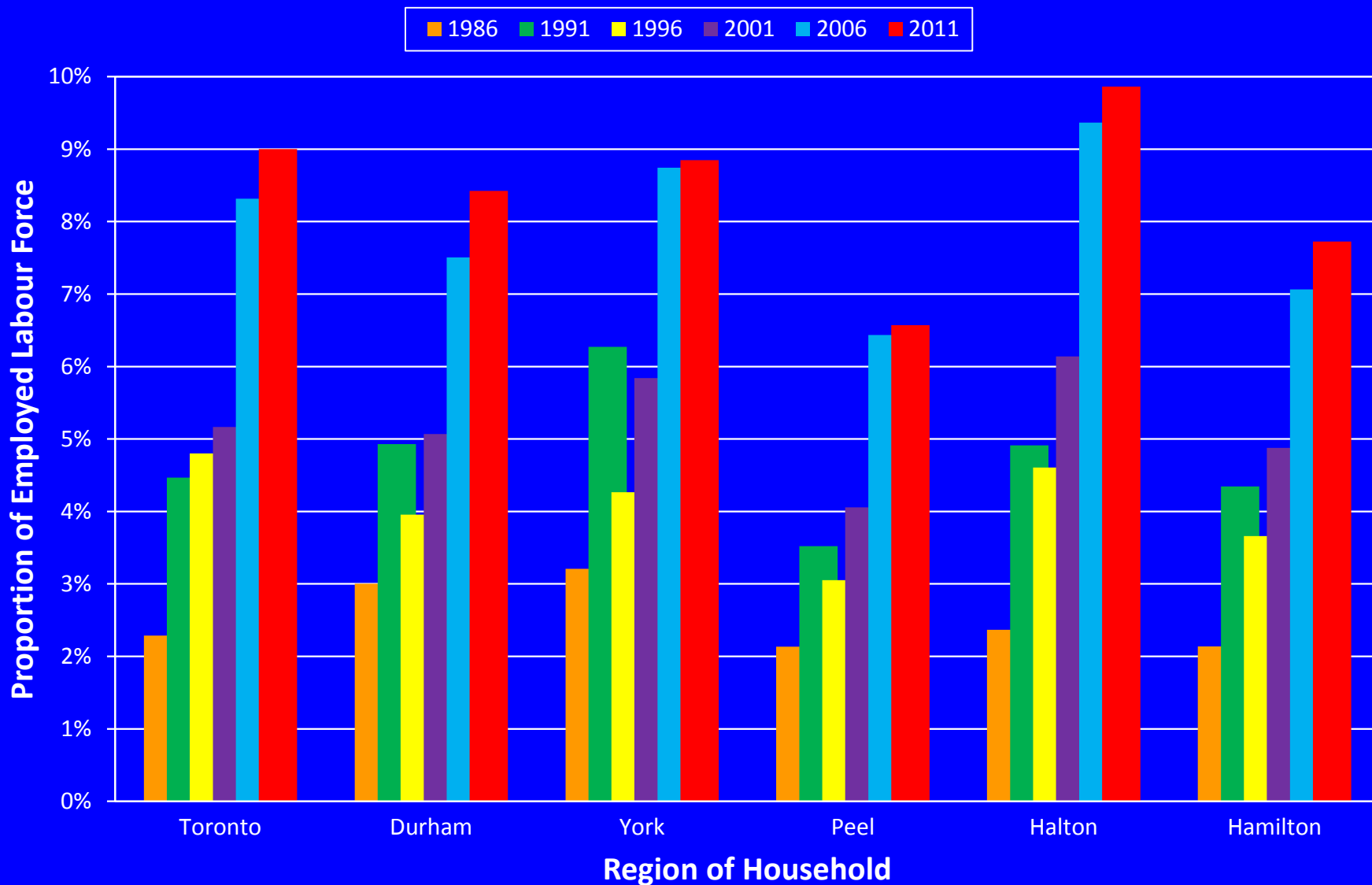
# Employed Labour Force



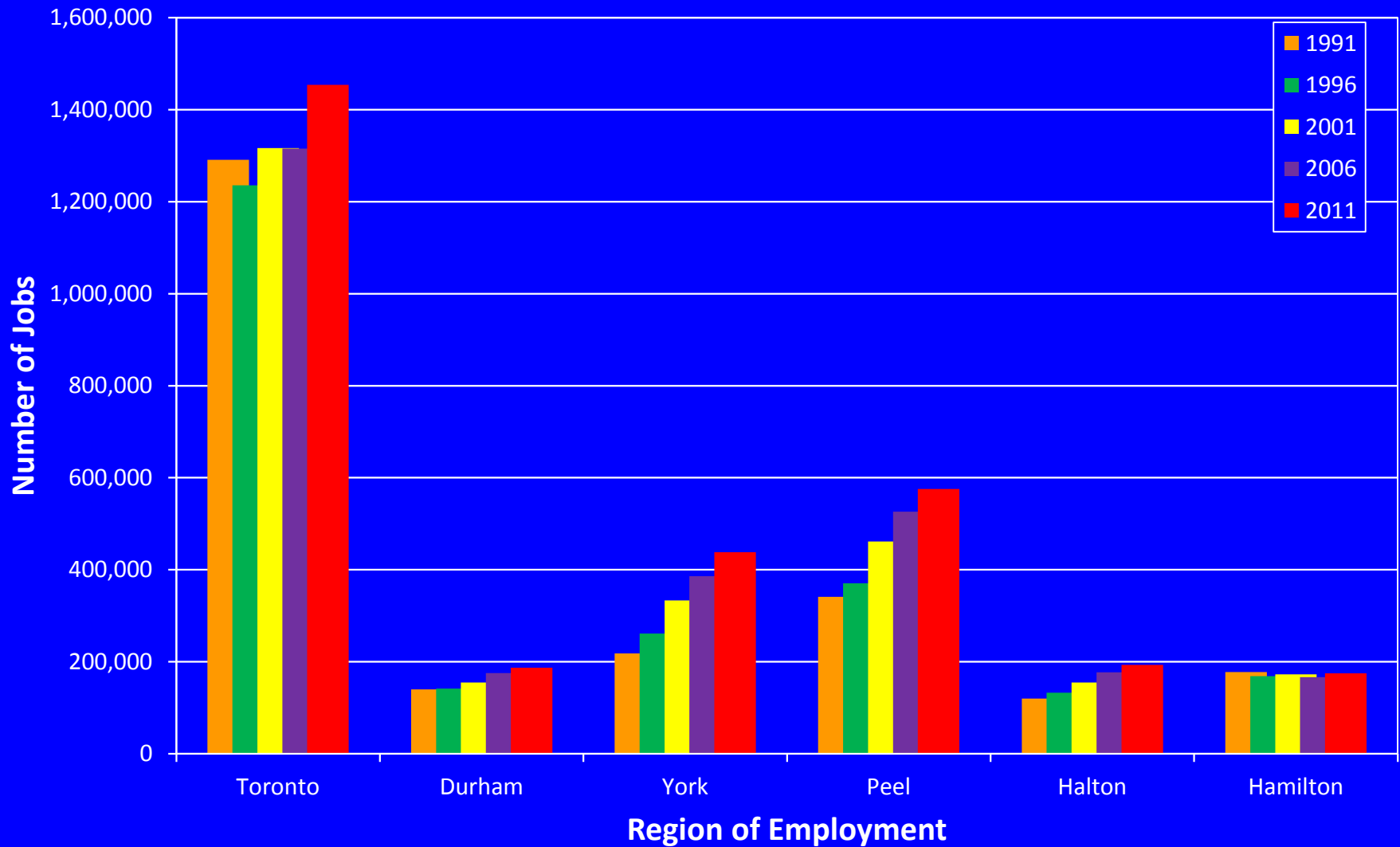
# Employed Labour Force



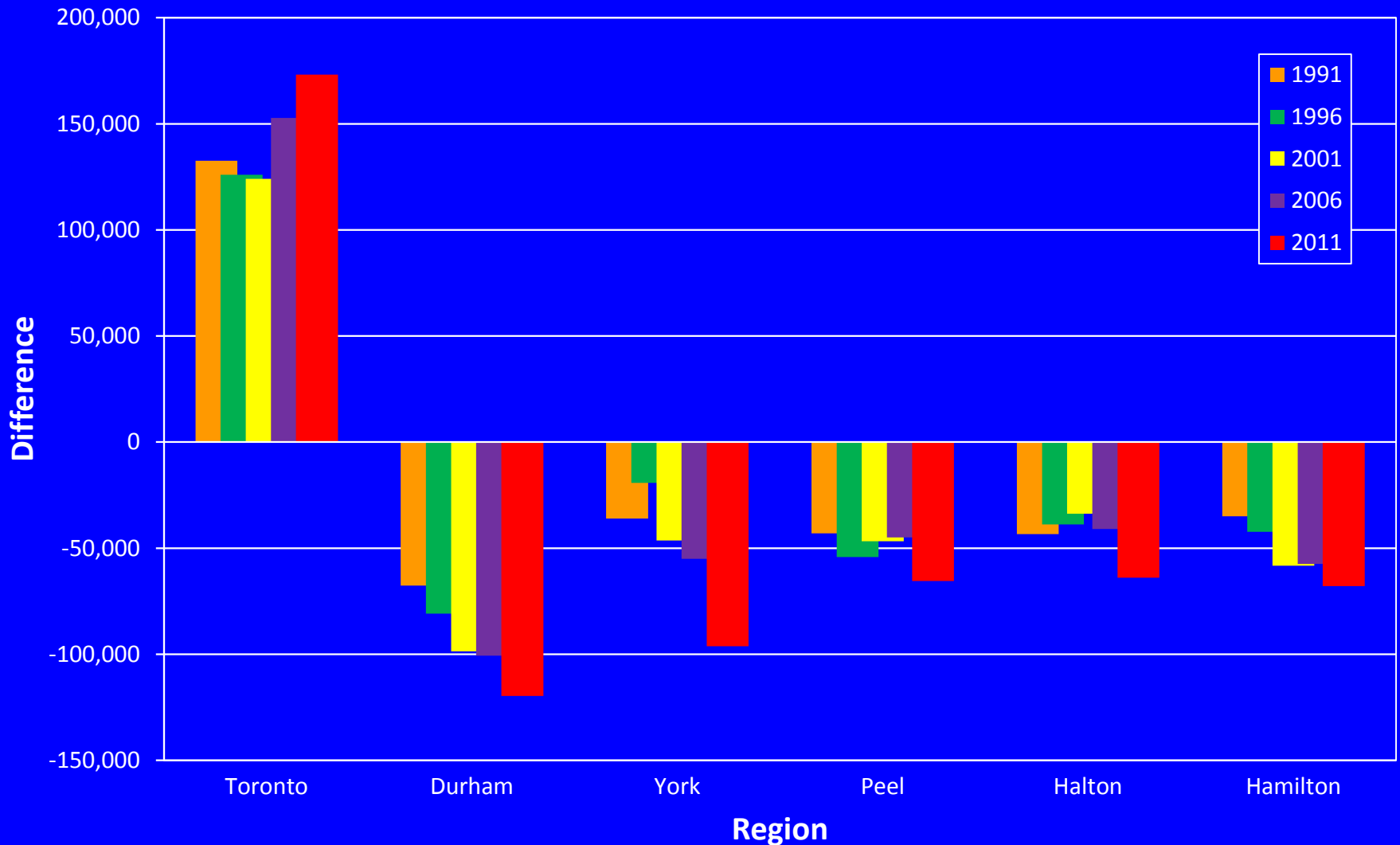
# Work at Home



# Employment (GTHA Residents)

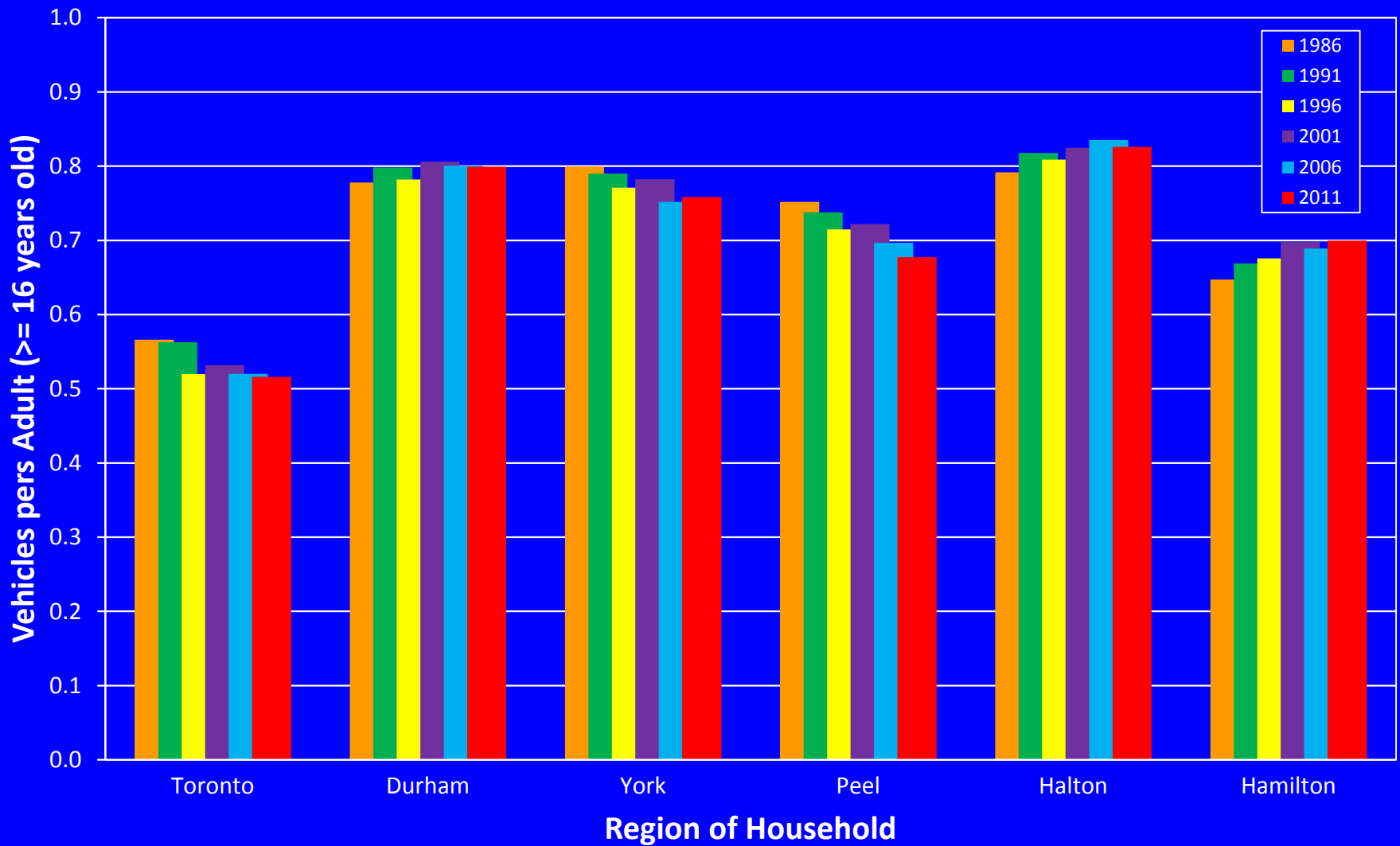


# Employment minus Employed Labour Force (GTHA Residents to GTHA Employment)

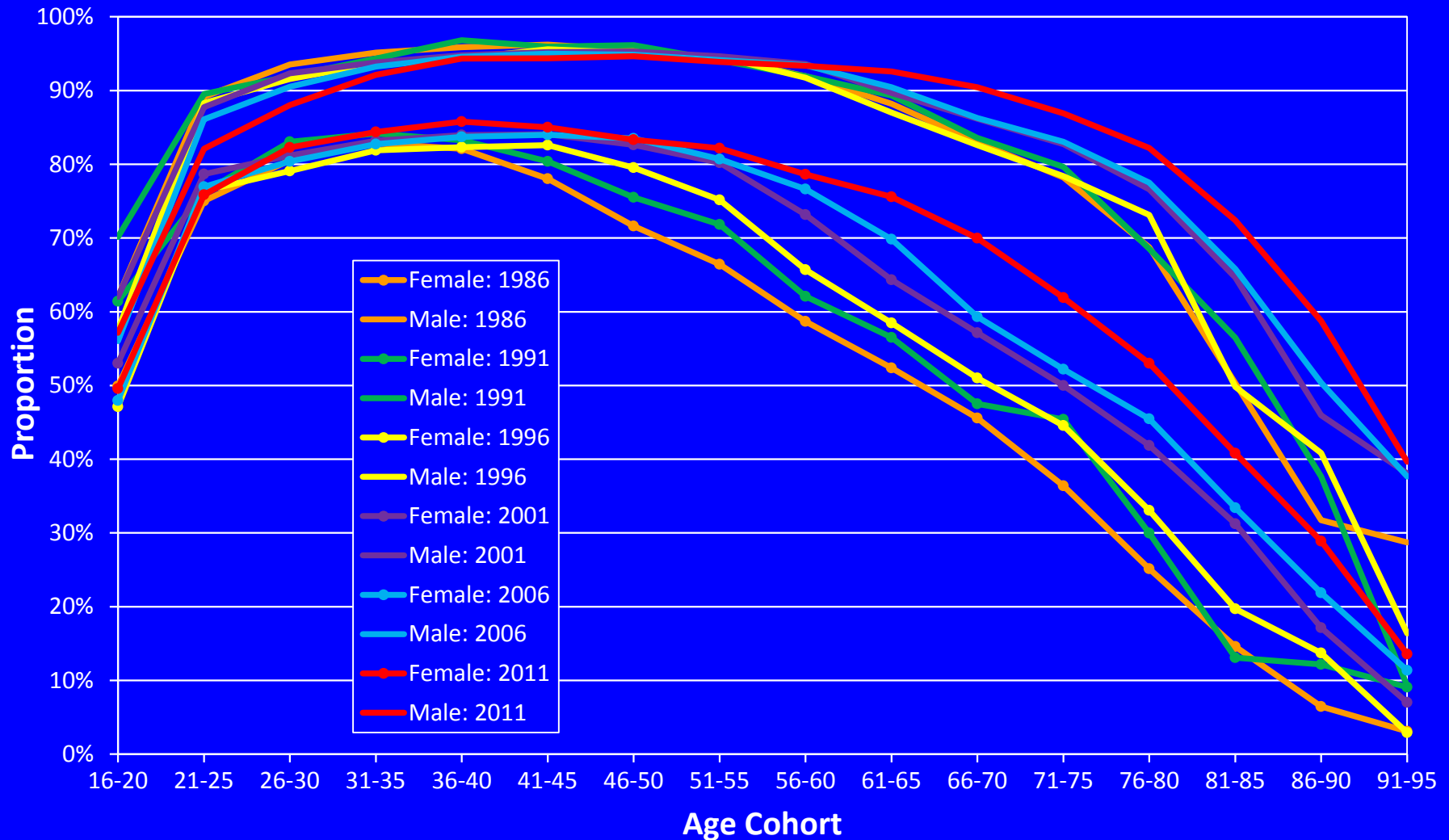


# Vehicle Availability

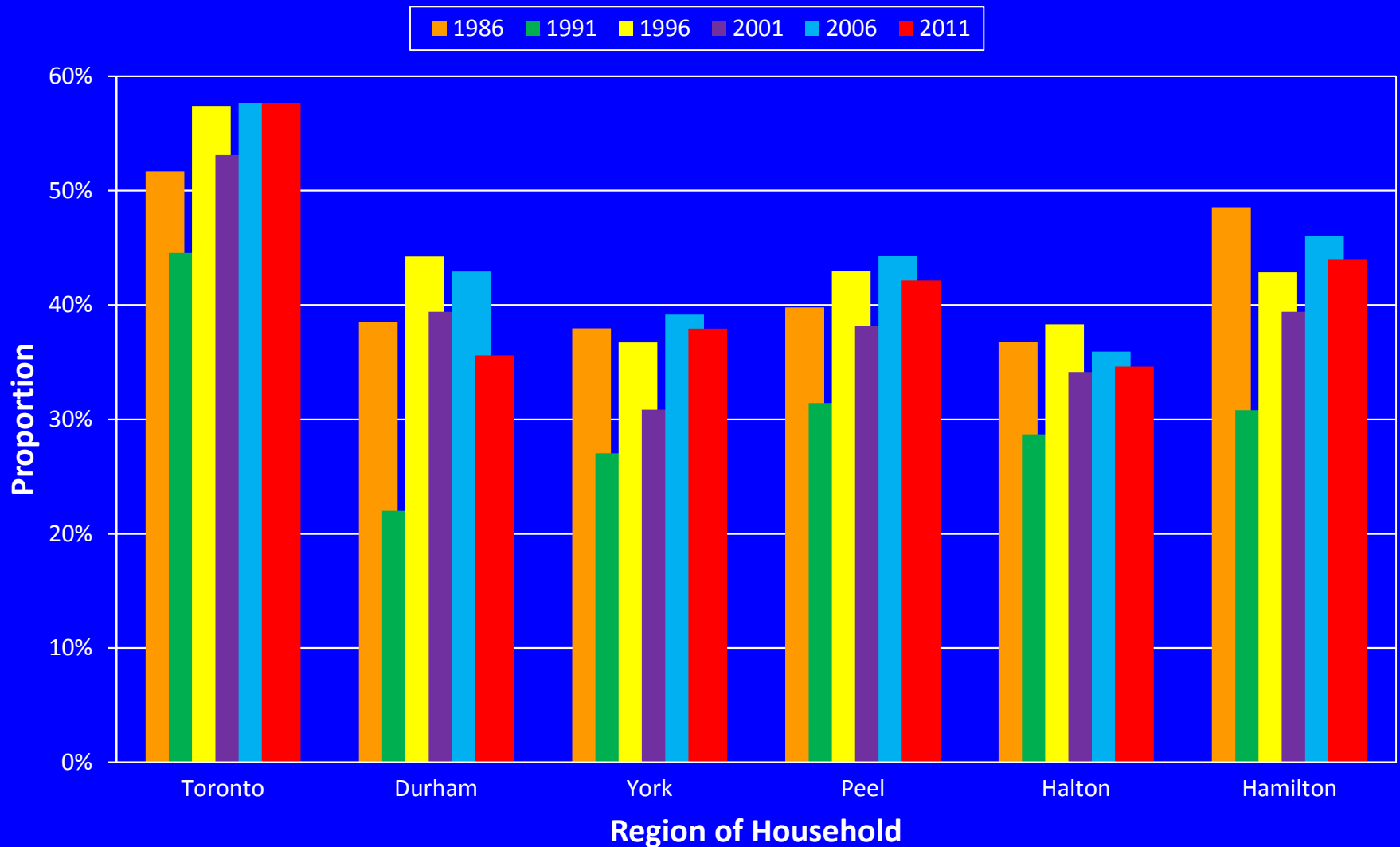
## GTHA Residents



# Proportion of GTHA Adults ( $\geq 16$ years old) With a Driver's Licence

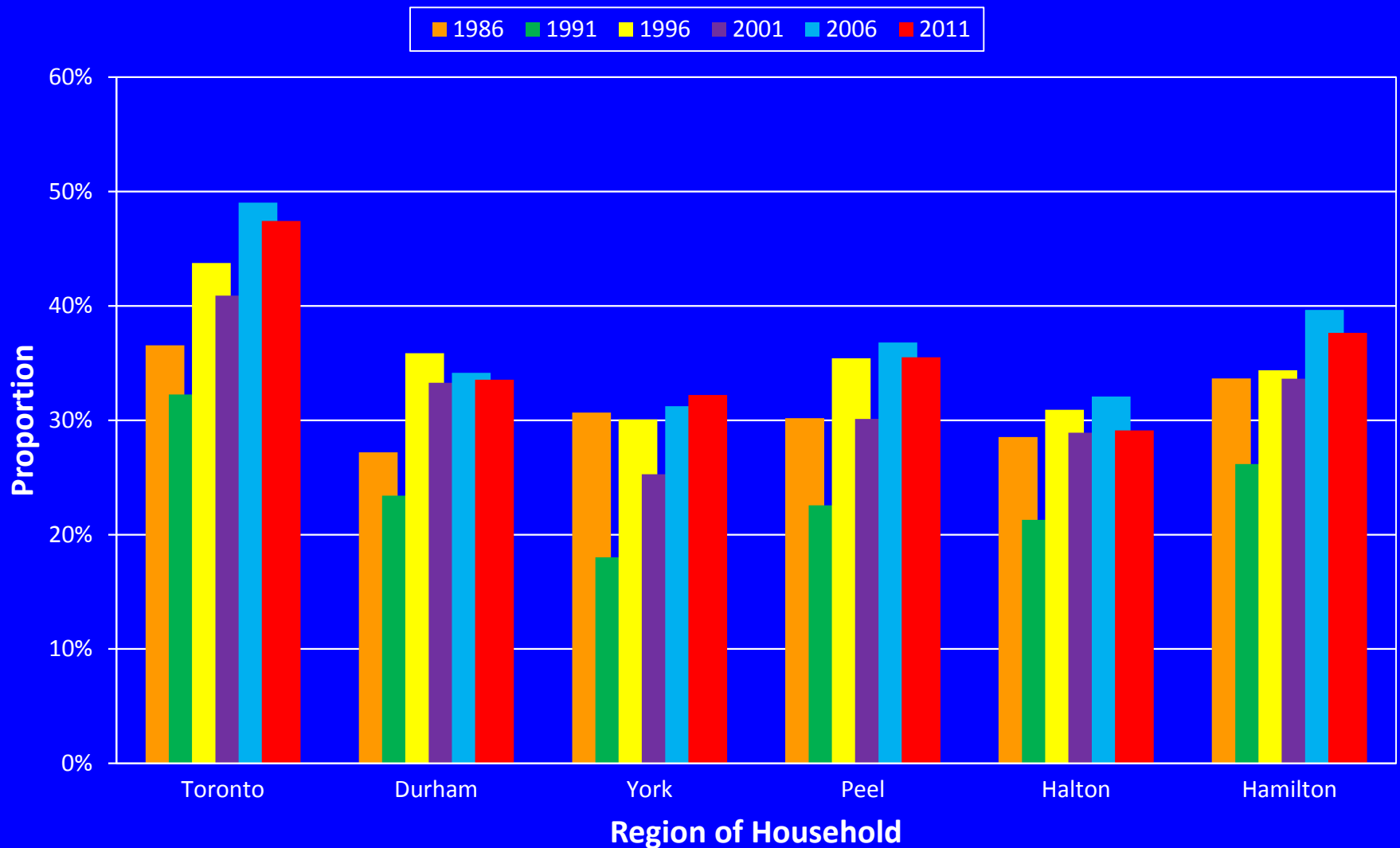


# Proportion of Females (16 - 21 years old) Without a Driver's Licence

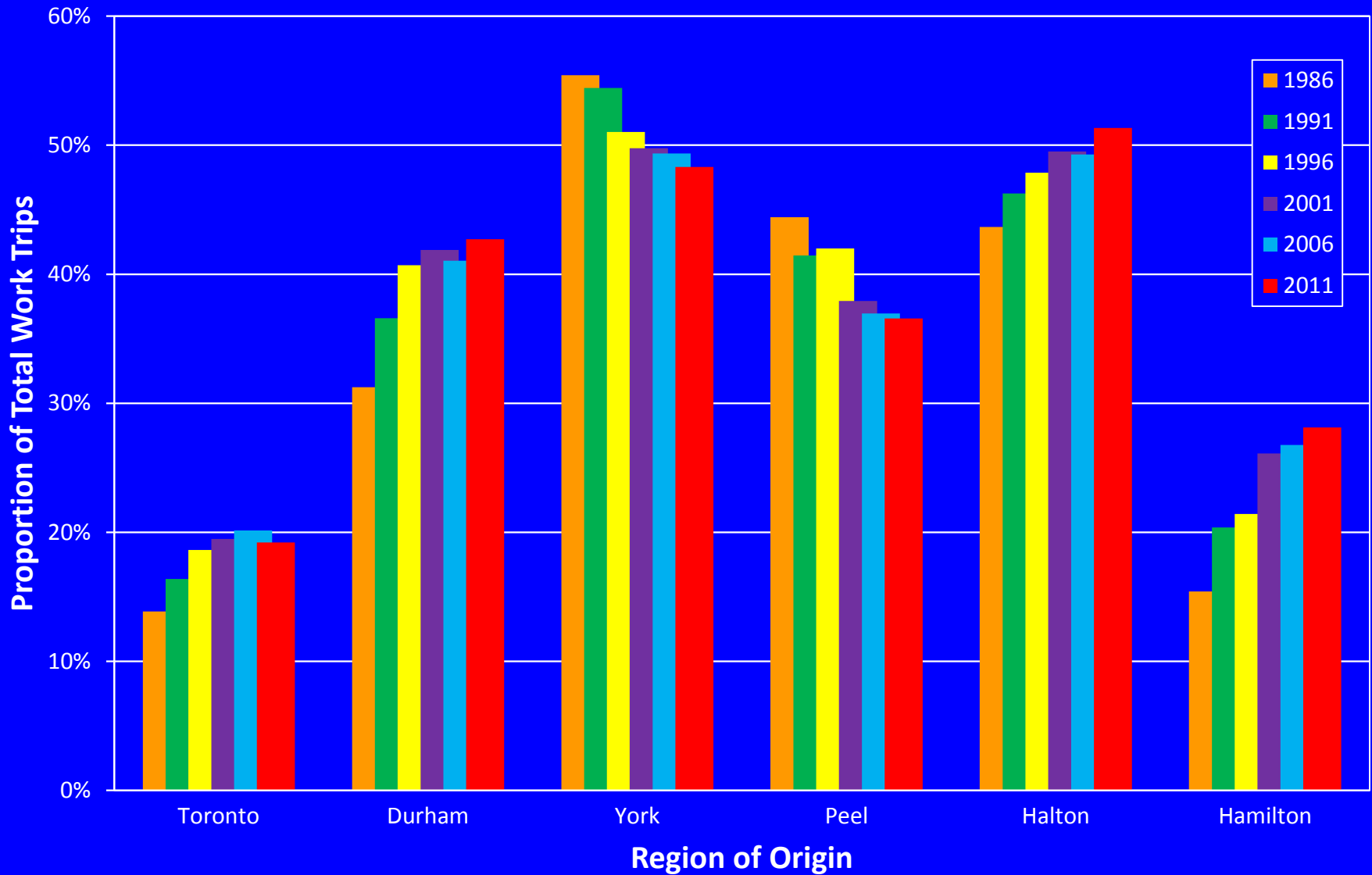




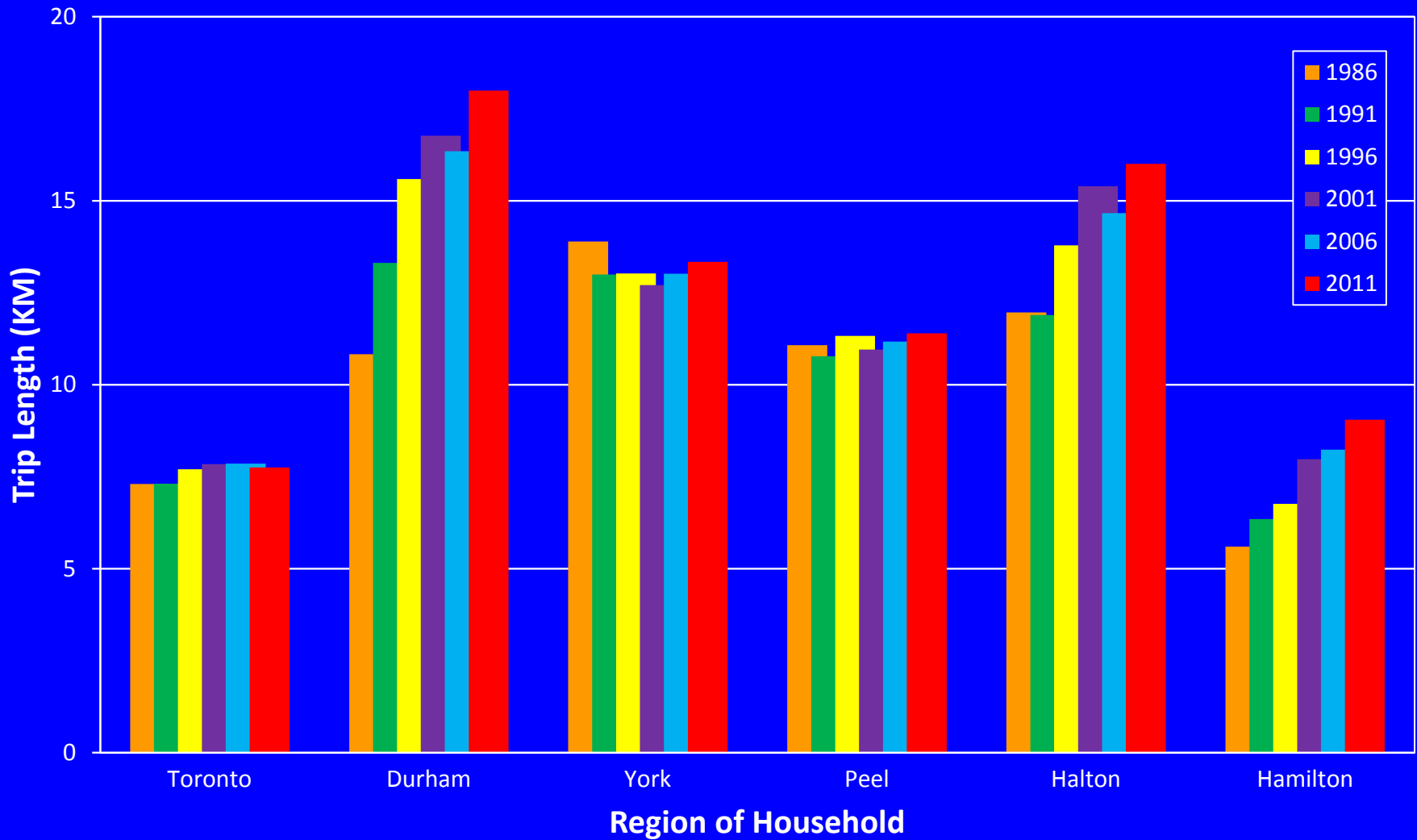
# Proportion of Males (16 - 21 years old) Without a Driver's Licence



# Inter-Regional Work Trips

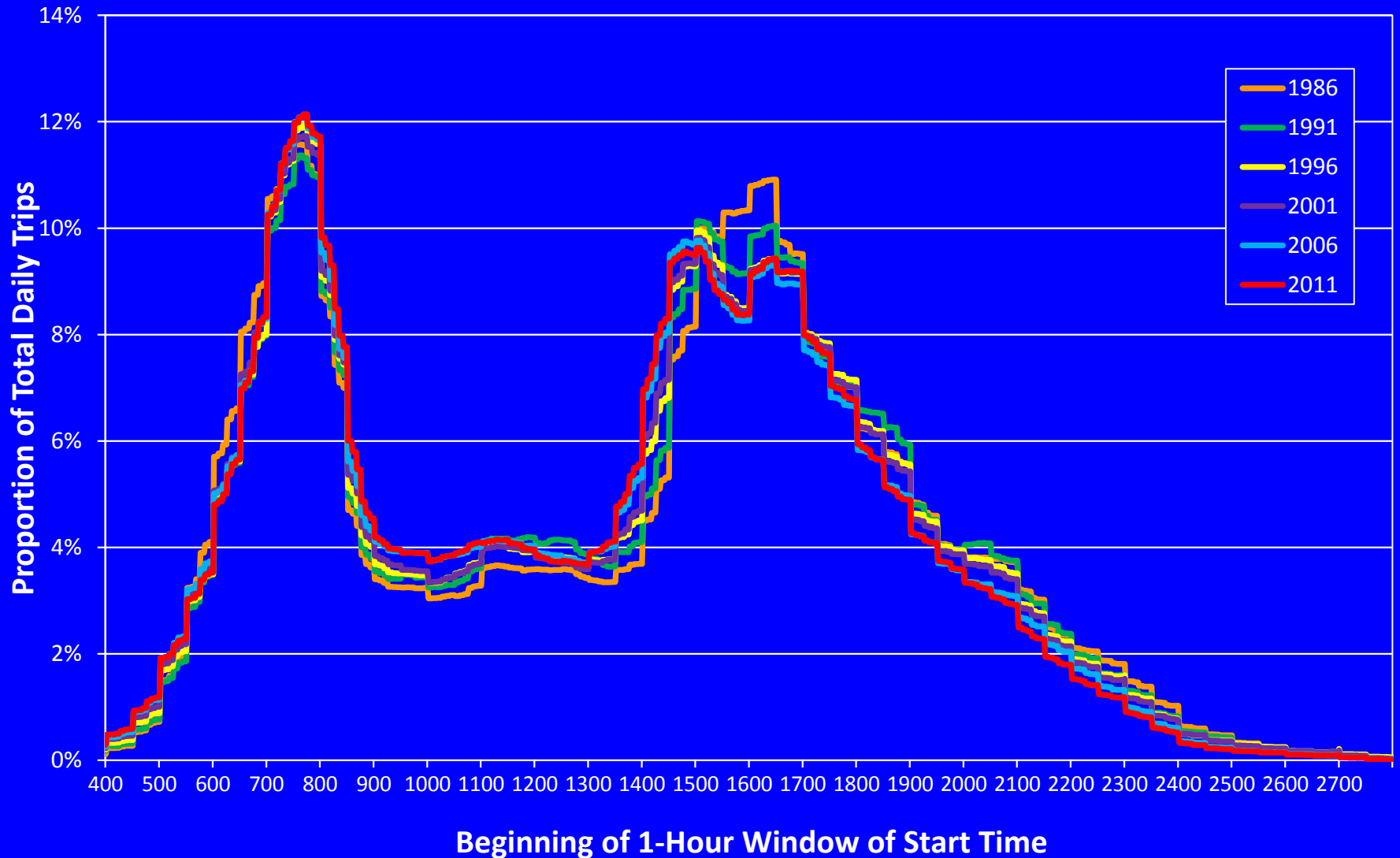


# First Trip to Work Median Trip Length



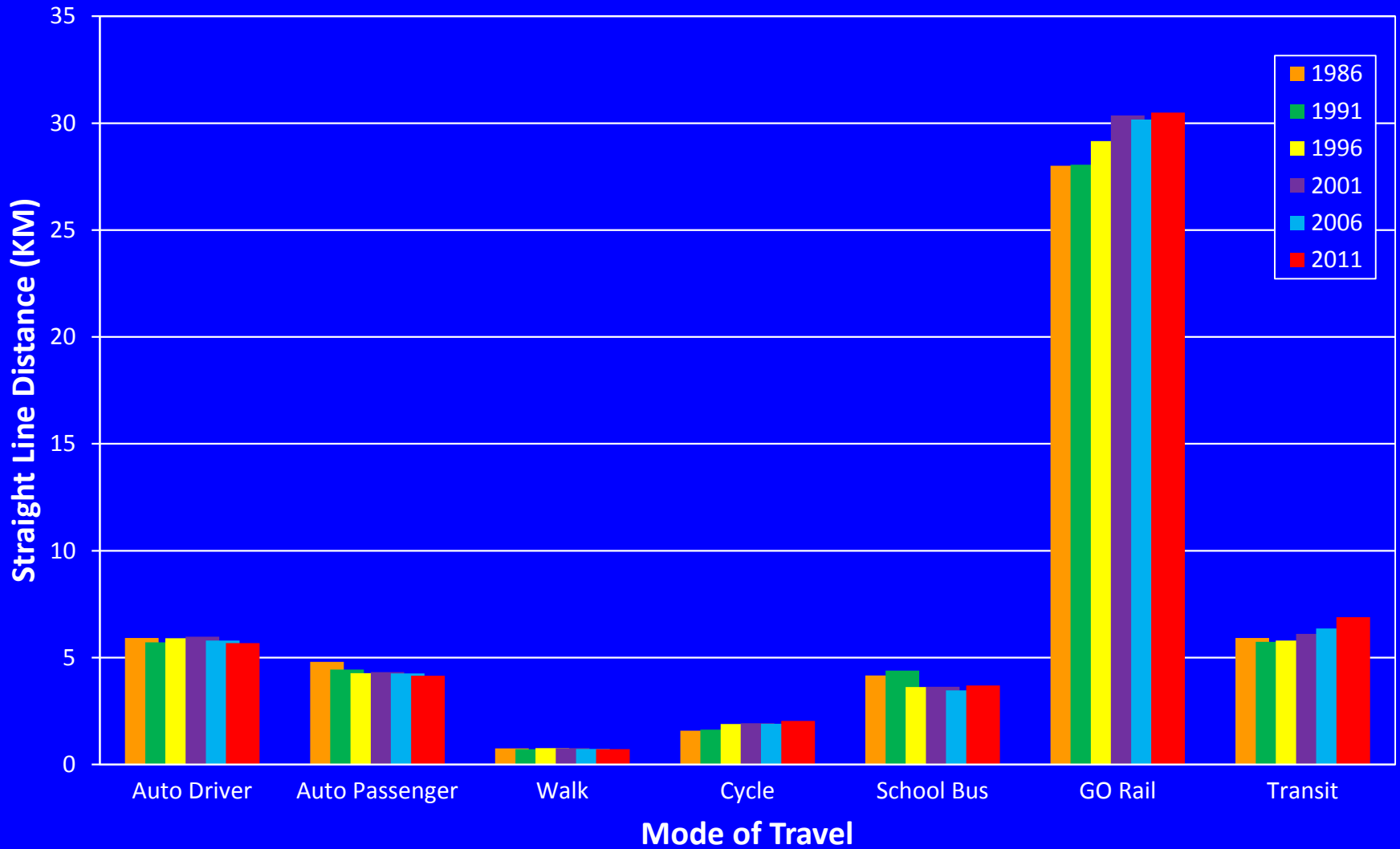
# Trip Start Time

## GTHA Residents



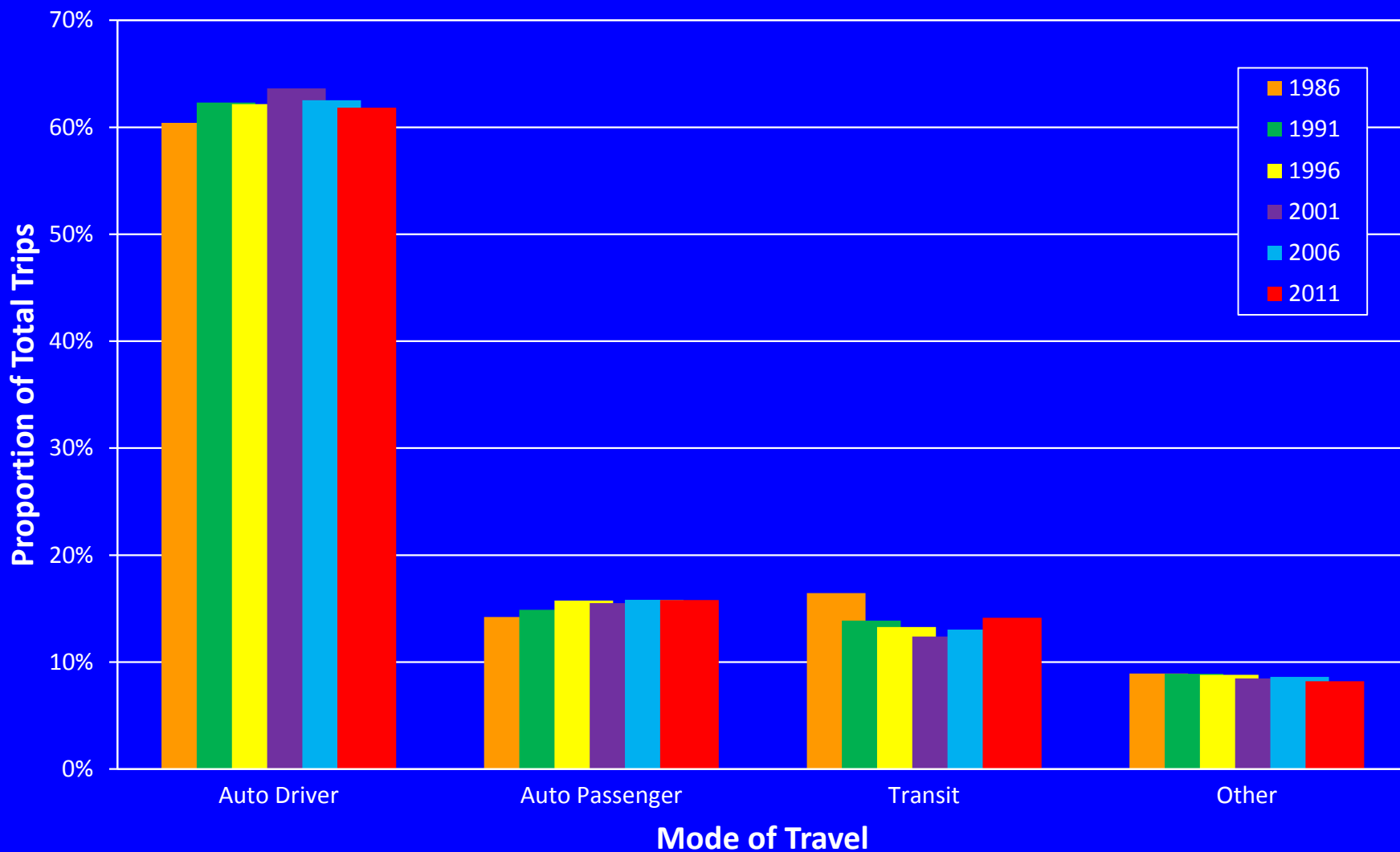
# Median Trip Length

## GTHA Residents

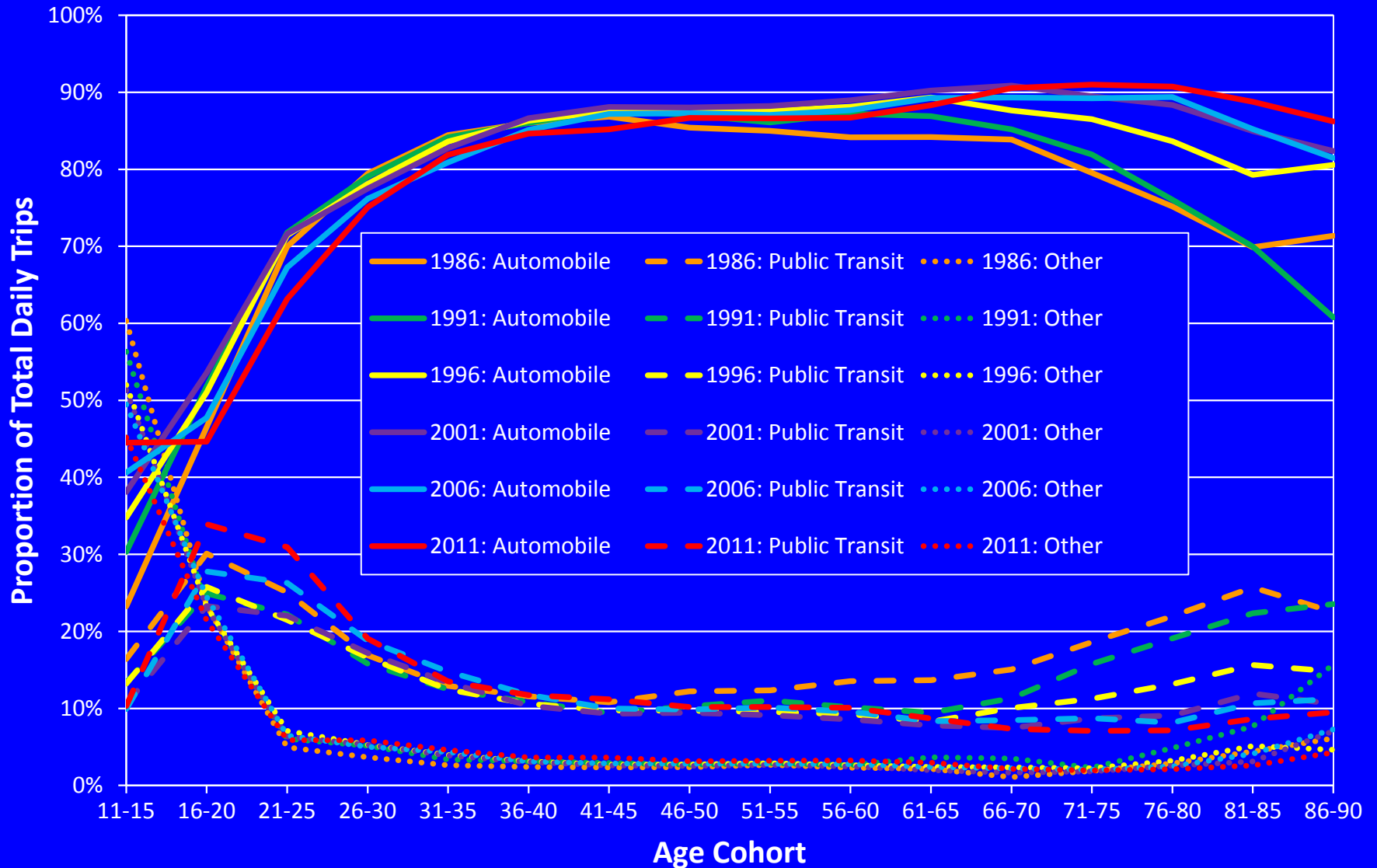


# All Trips by Mode

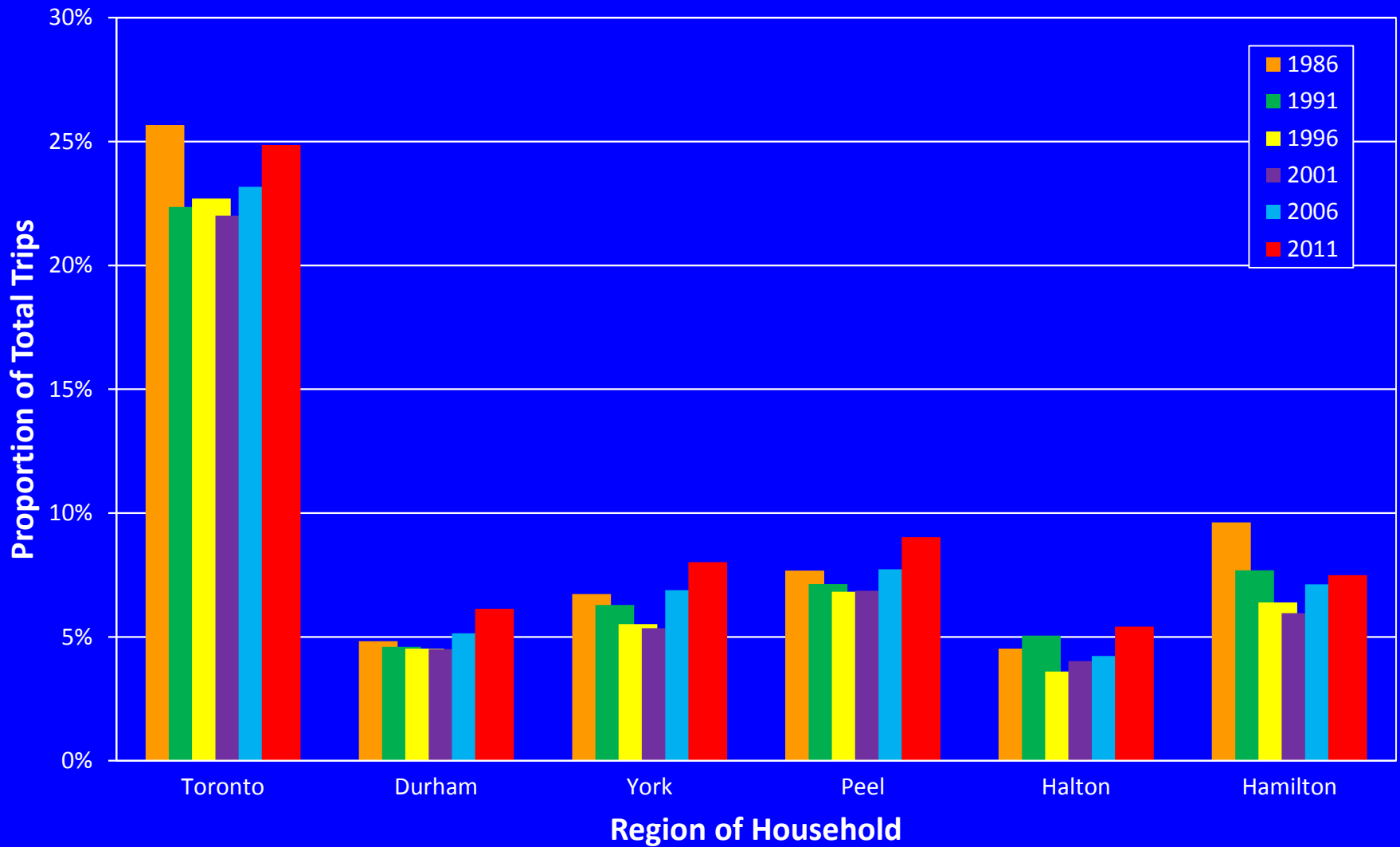
## GTHA Residents



# GTHA Mode Split

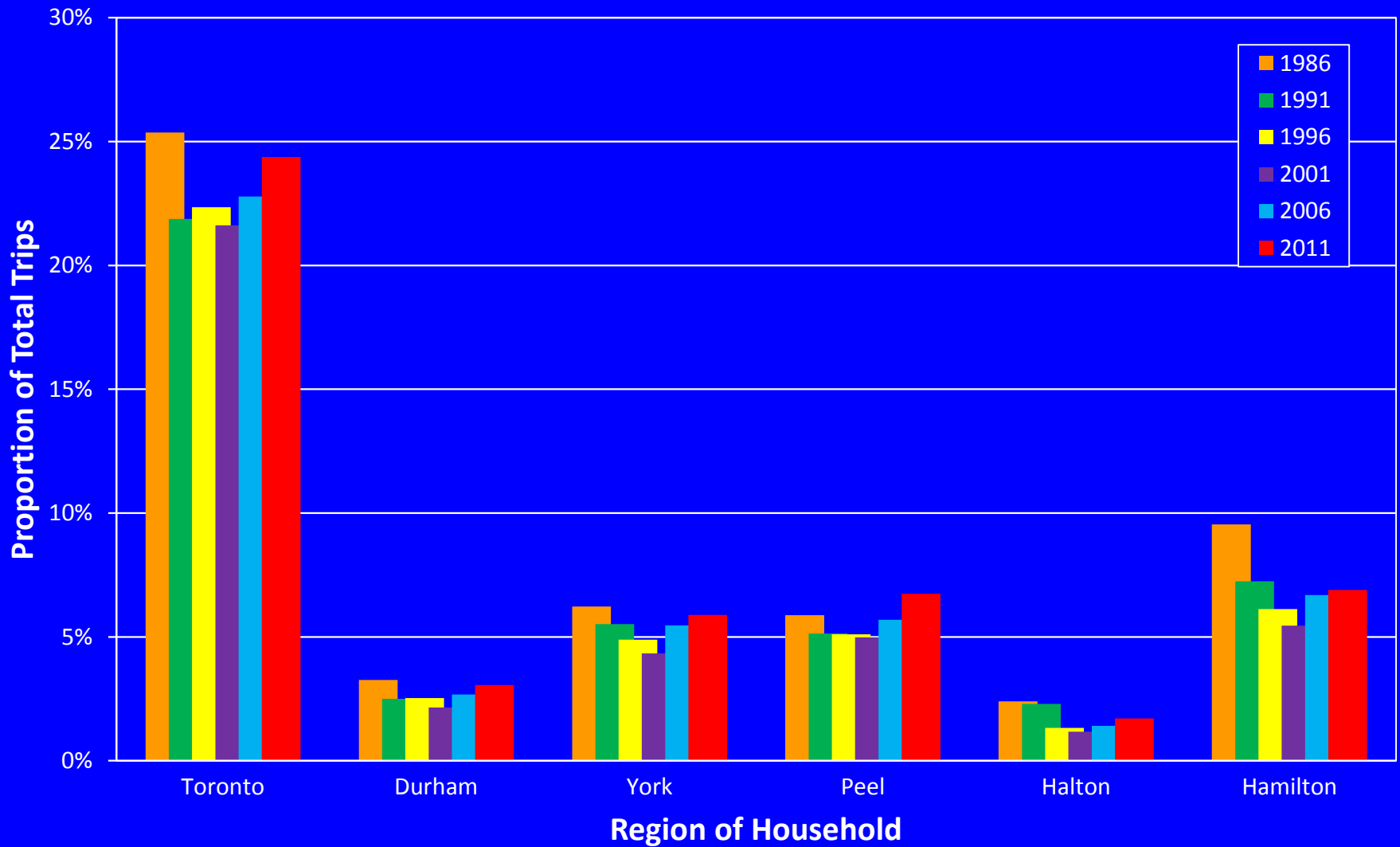


# Transit Mode Split (including GO Rail)



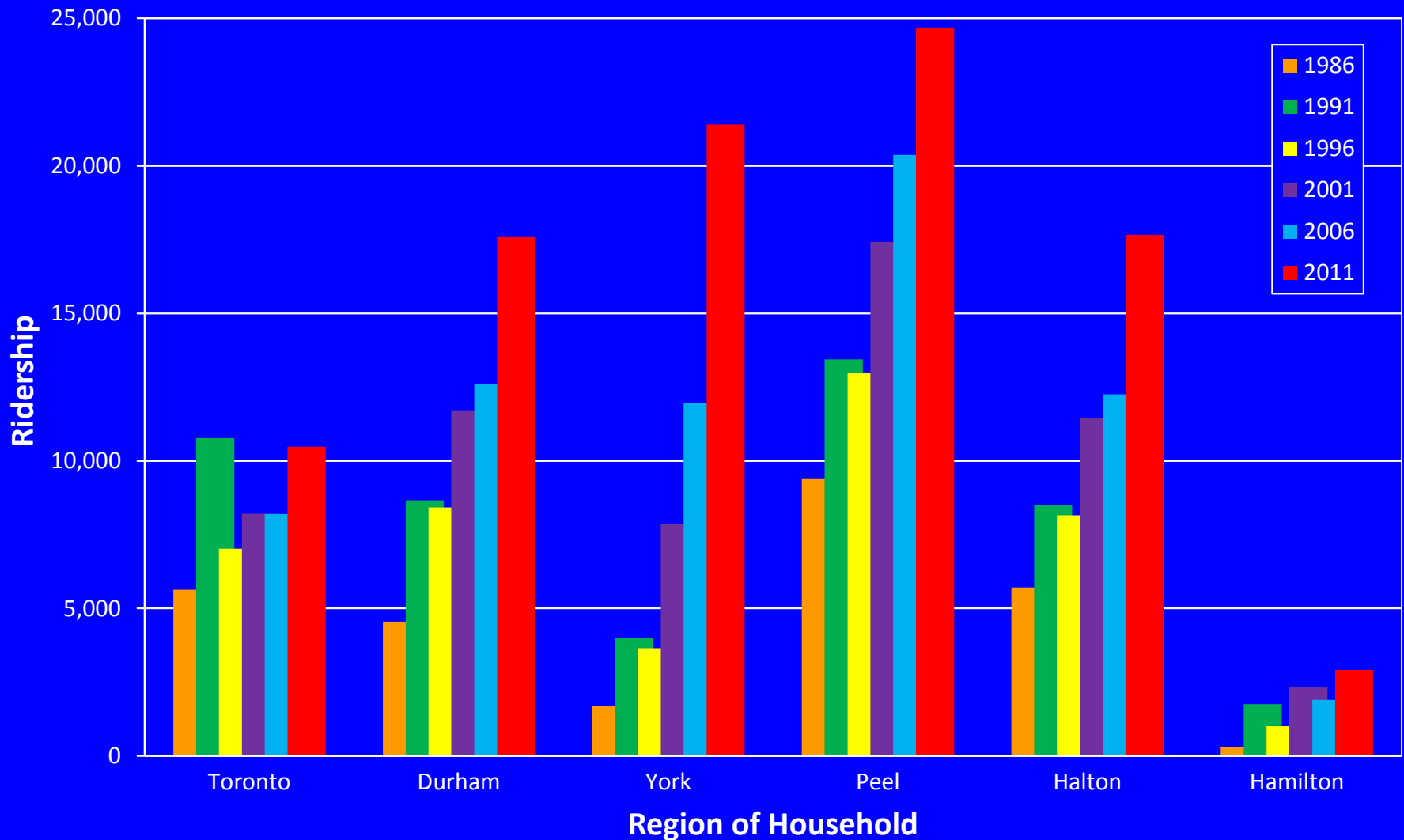


# Transit Mode Split (excluding GO Rail)



# GO Rail Ridership

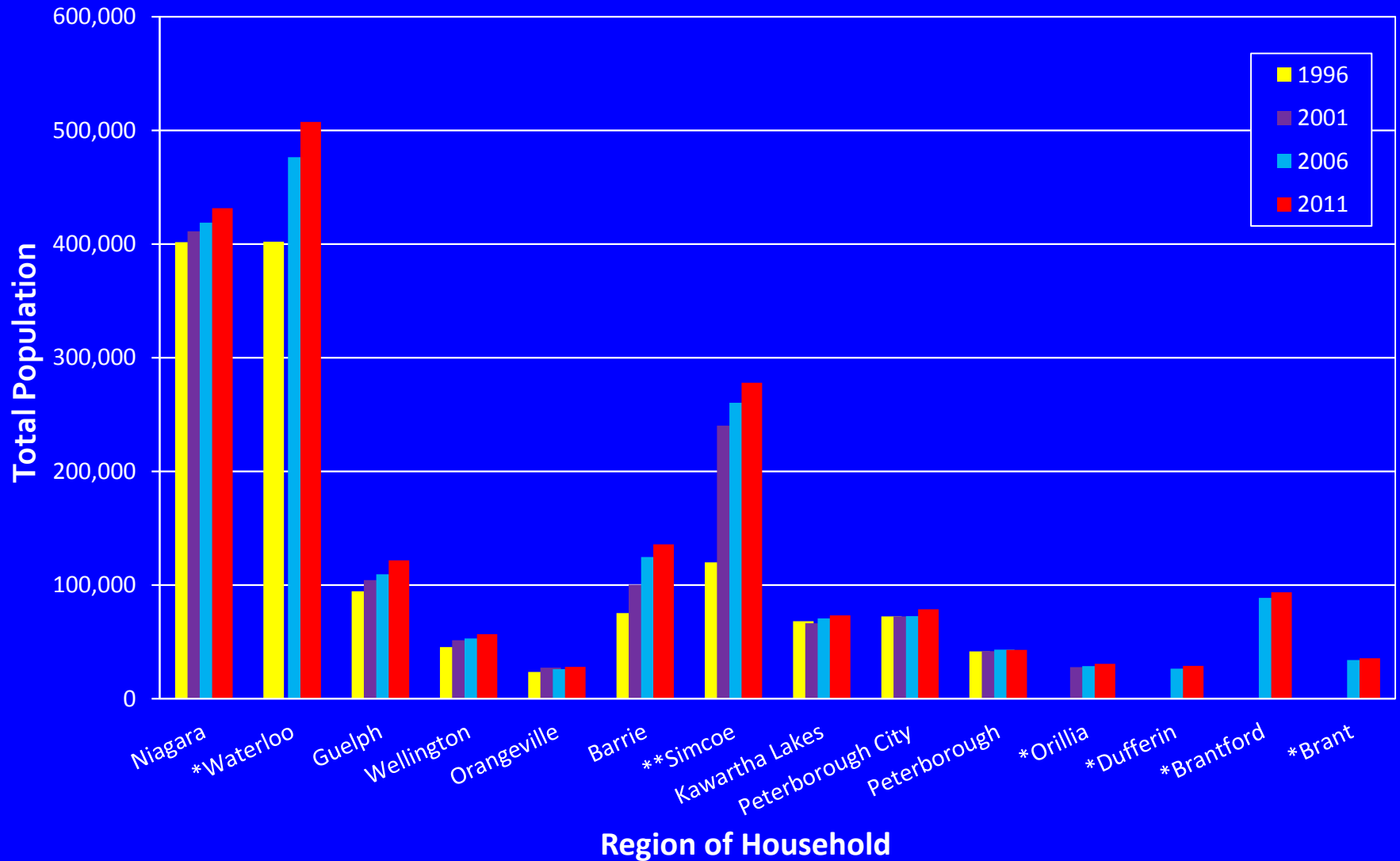
## First Trip to Work



# Time Series Analysis Non-GTHA

1996, 2001, 2006 and 2011

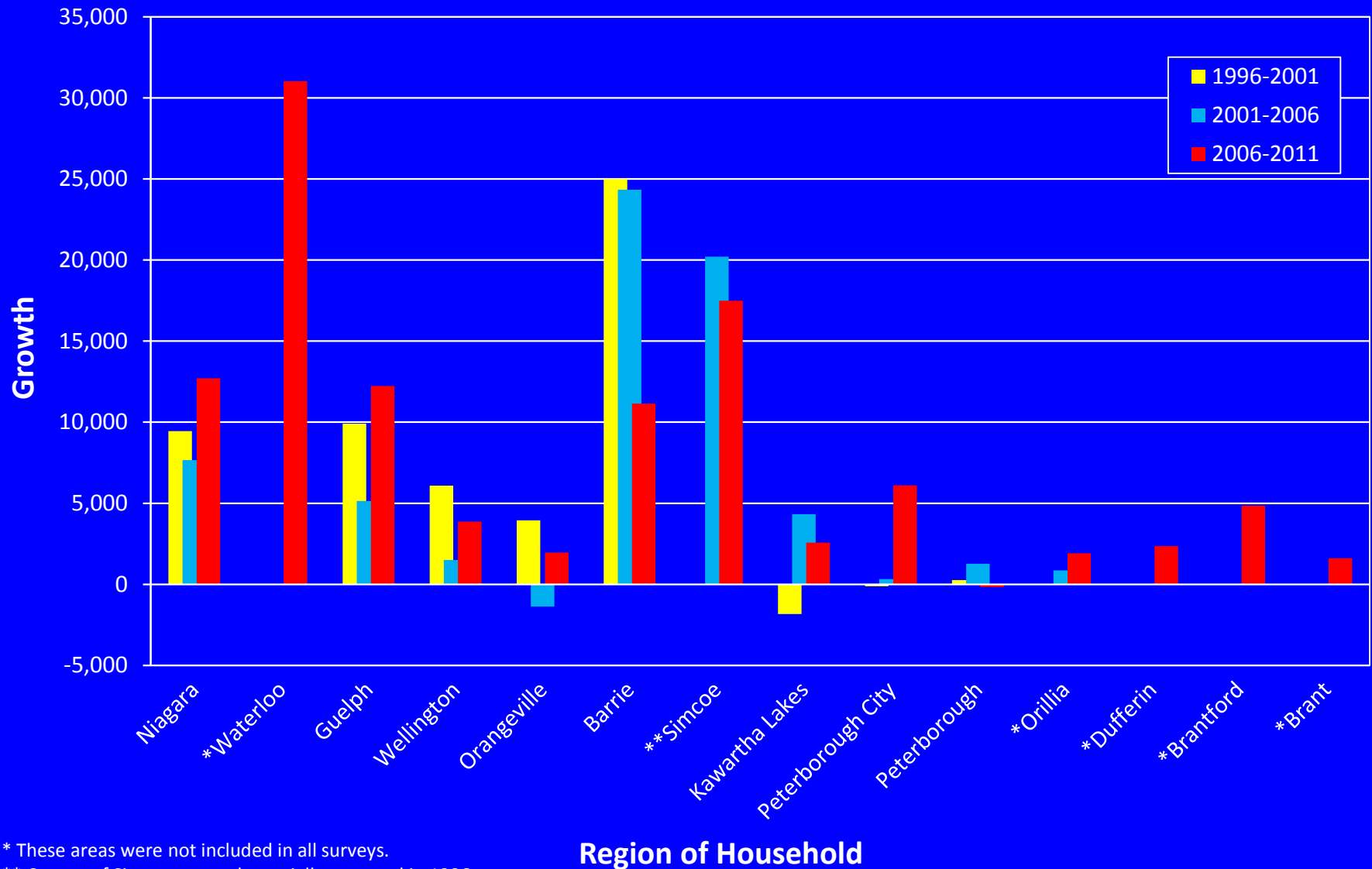
# Population



\* These areas were not included in all surveys.

\*\* County of Simcoe was only partially surveyed in 1996.

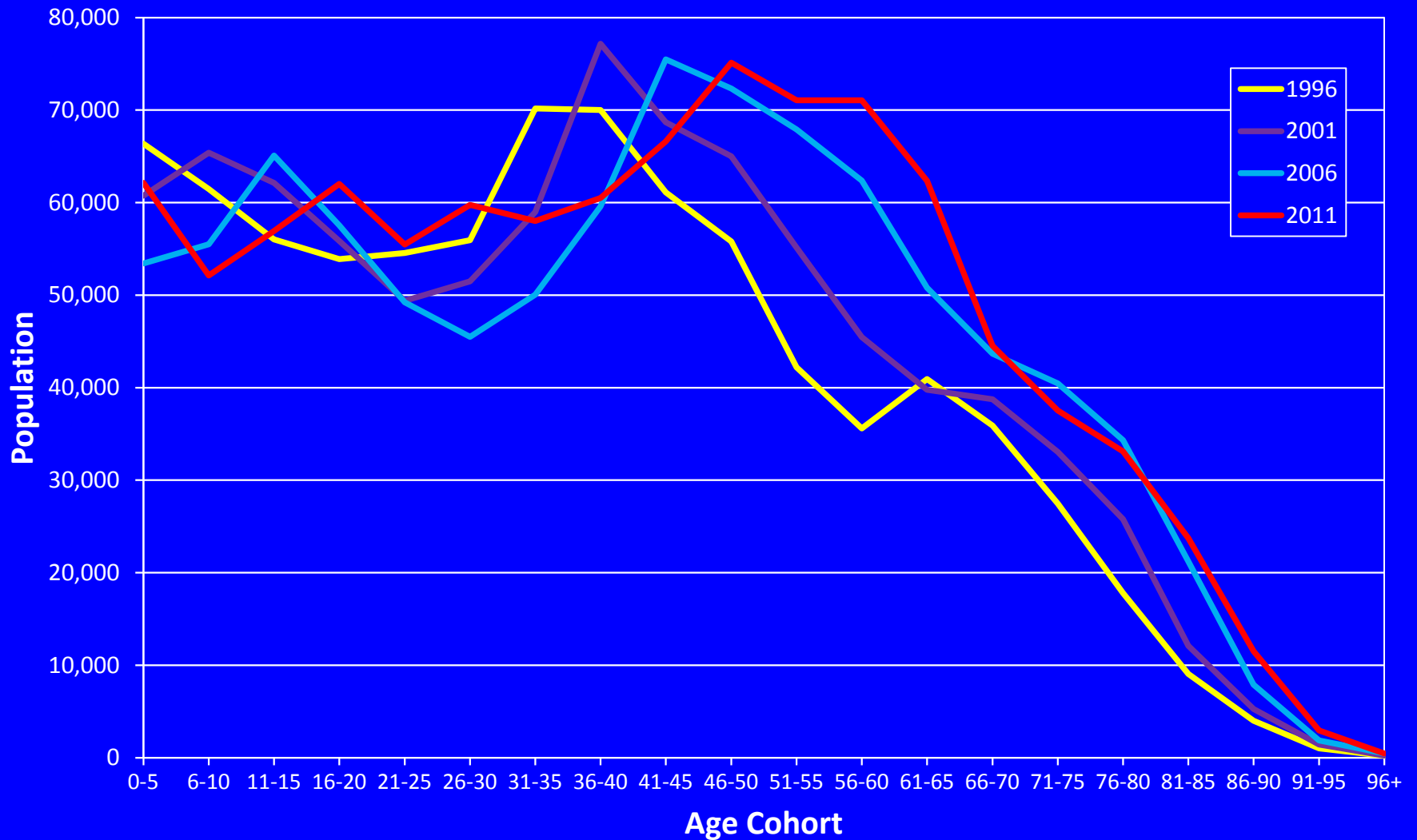
# 5-Year Population Growth



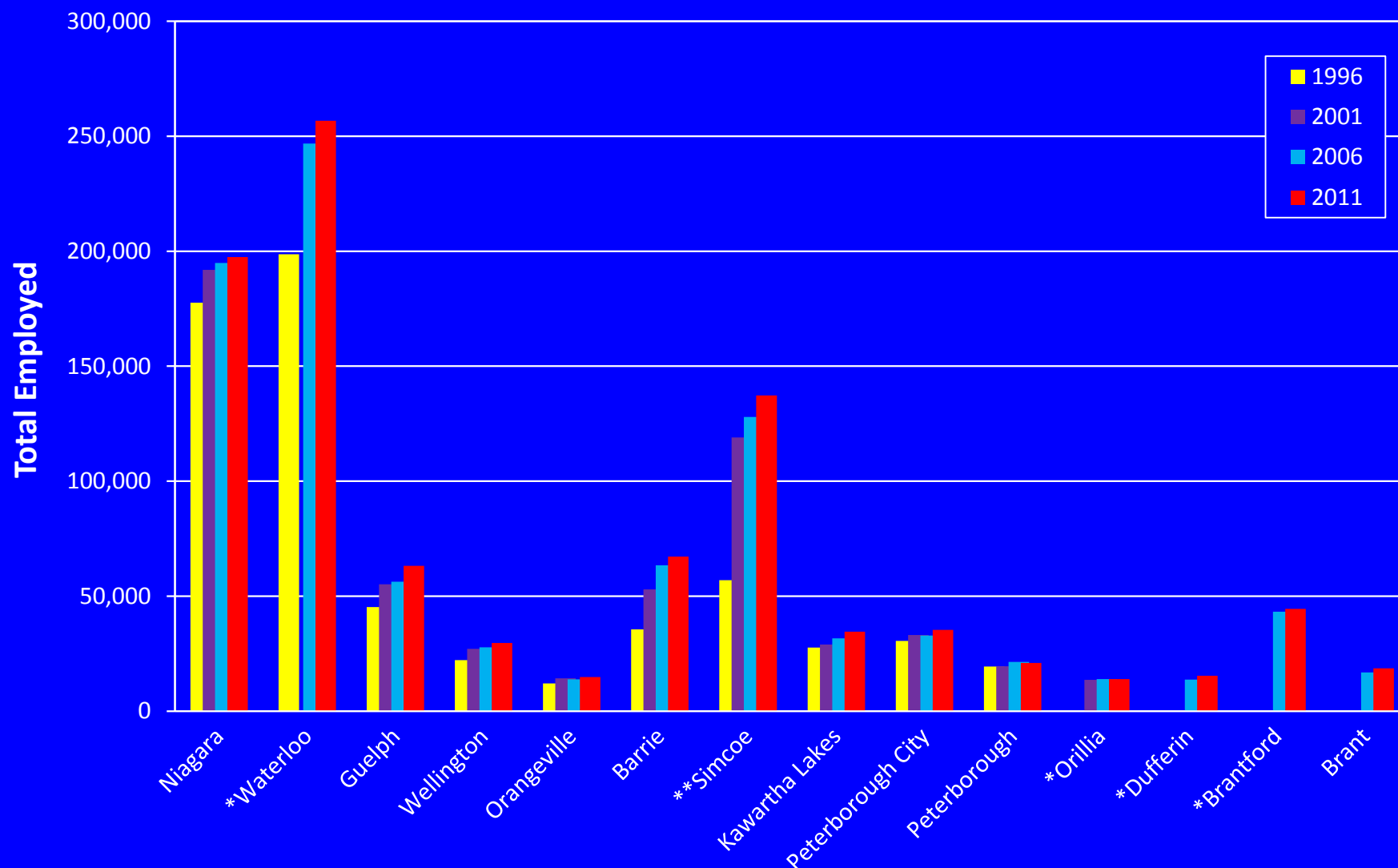
\* These areas were not included in all surveys.  
 \*\* County of Simcoe was only partially surveyed in 1996.

# Age Distribution

## Non-GTHA Residents



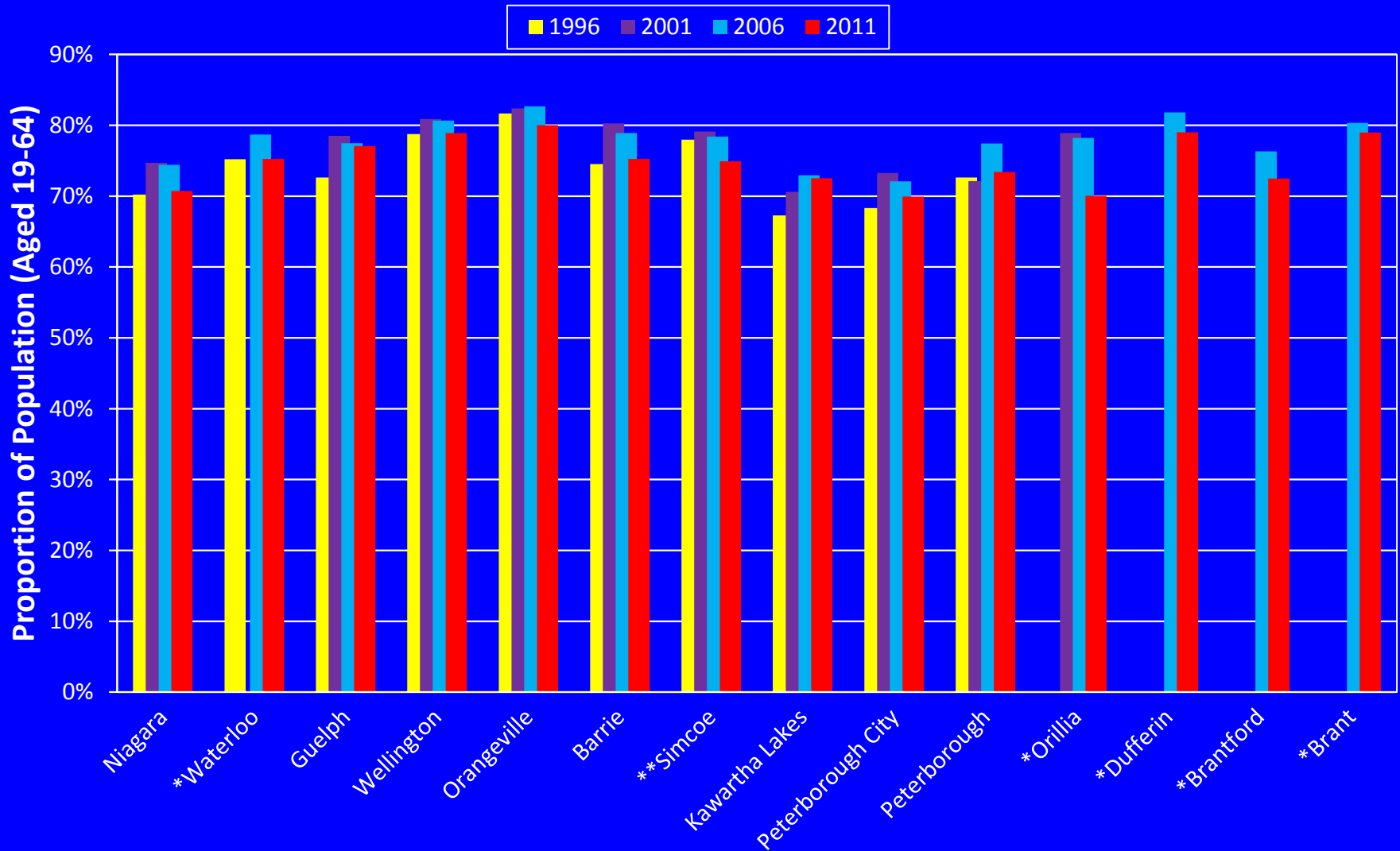
# Employed Labour Force



\* These areas were not included in all surveys.  
 \*\* County of Simcoe was only partially surveyed in 1996.

Region of Household

# Employed Labour Force Participation Rate

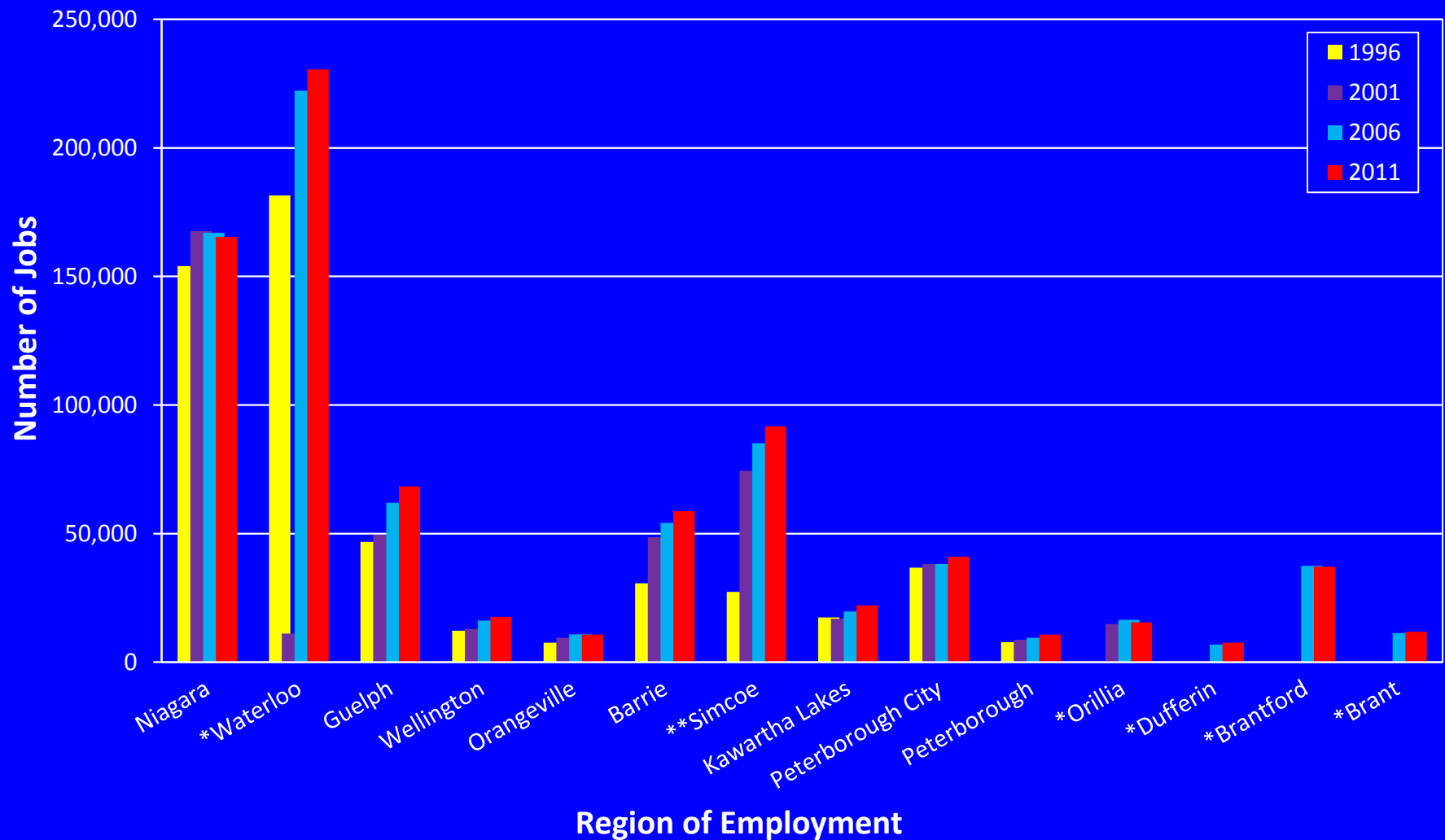


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\*\* County of Simcoe was only partially surveyed in 1996.



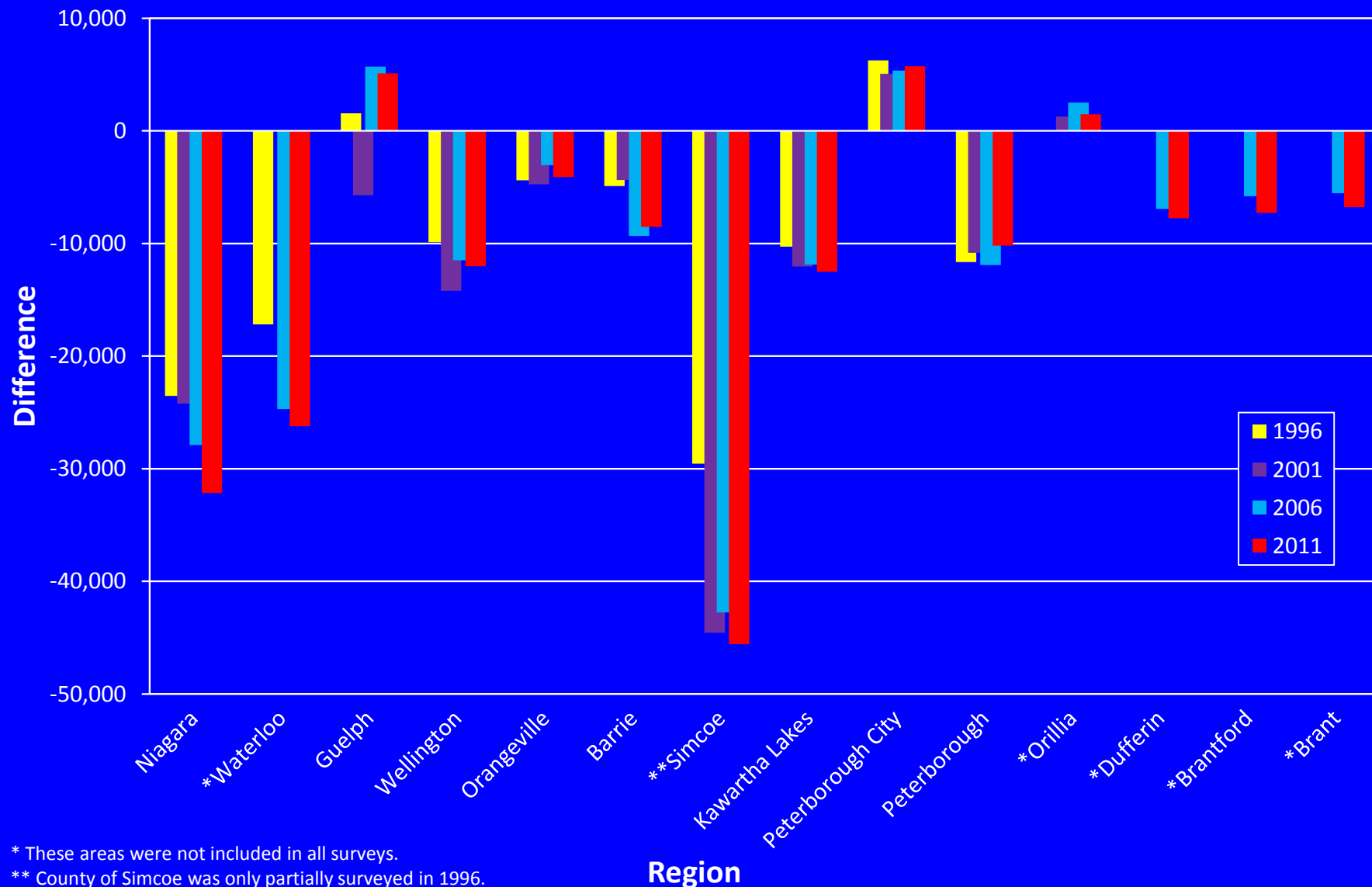
# Non-GTHA Employment (Survey Area Residents)



\* These areas were not included in all surveys.

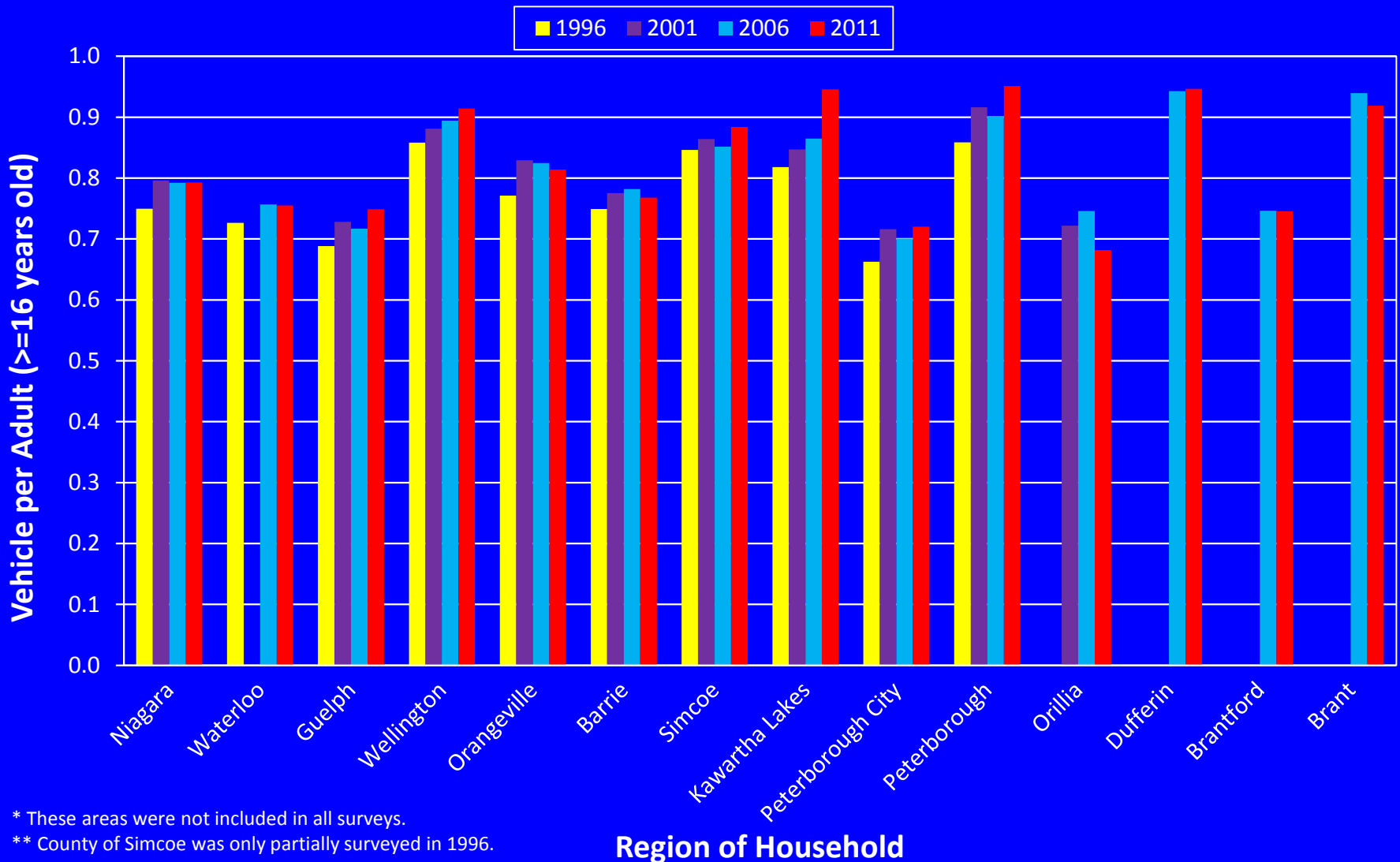
\*\* County of Simcoe was only partially surveyed in 1996.

# Employment minus Employed Labour Force

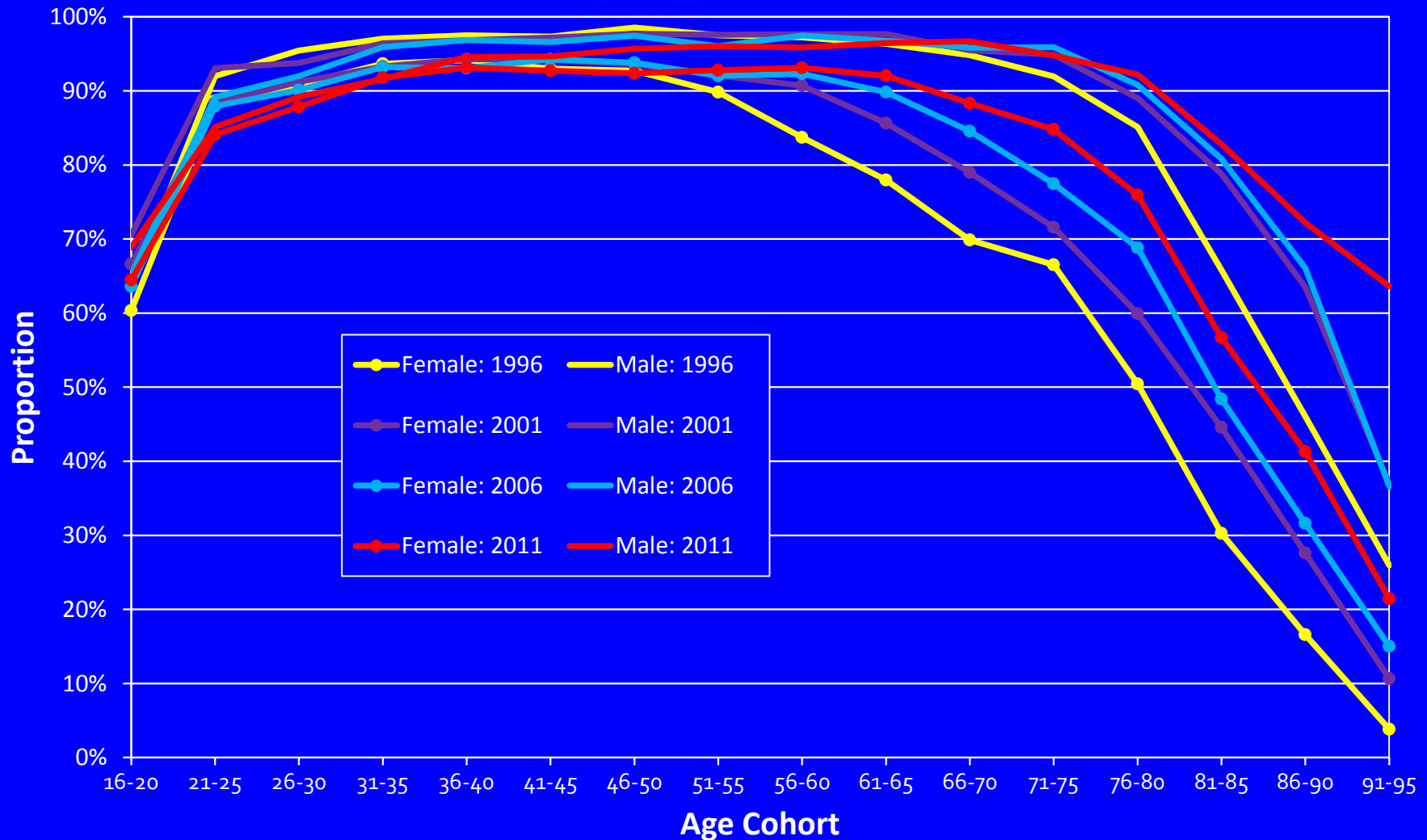


# Vehicle Availability

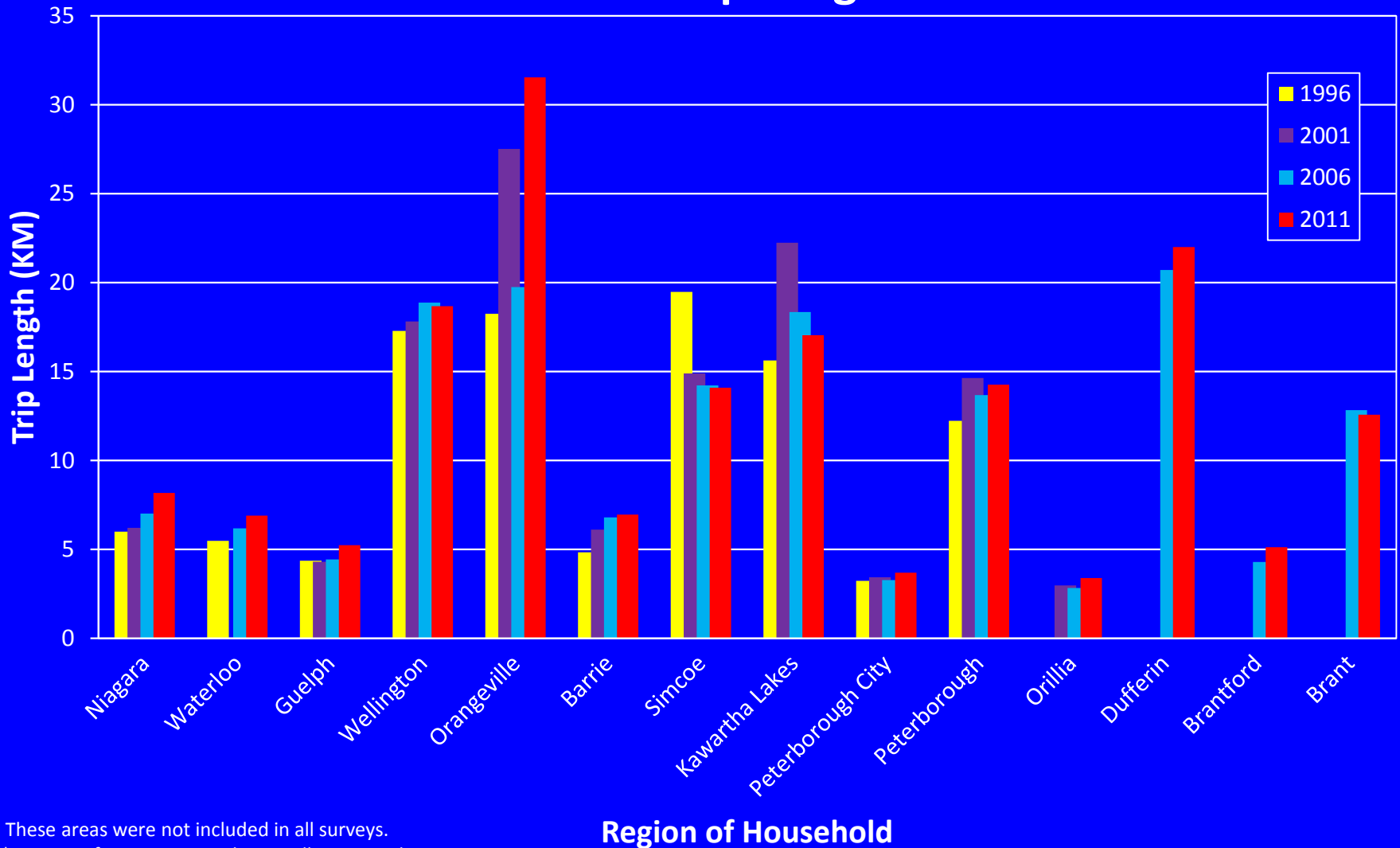
## Non-GTHA Residents



# Proportion of Non-GTHA Adults ( $\geq 16$ years old) With a Driver's Licence



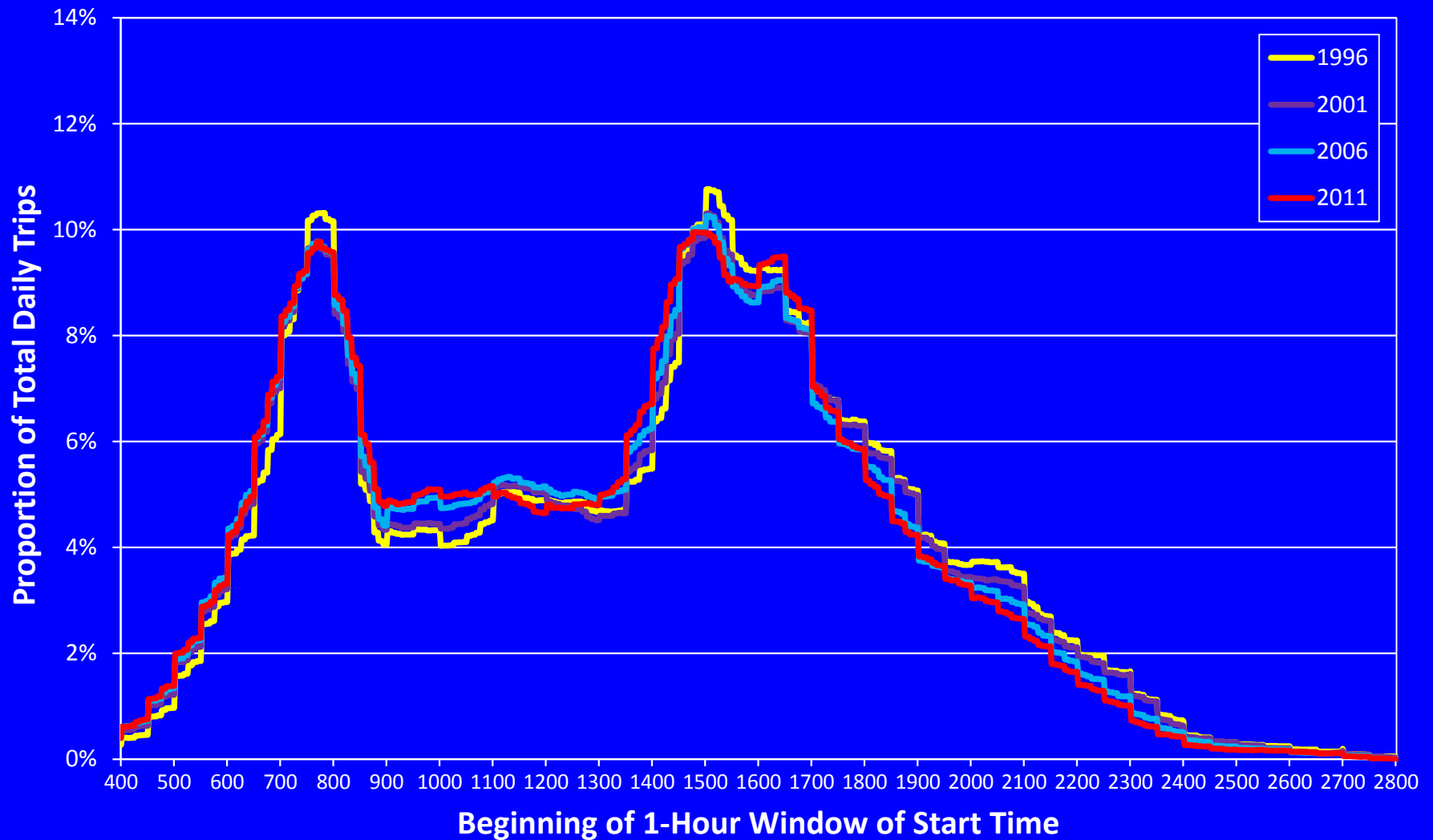
# First Trip to Work Median Trip Length



\* These areas were not included in all surveys.  
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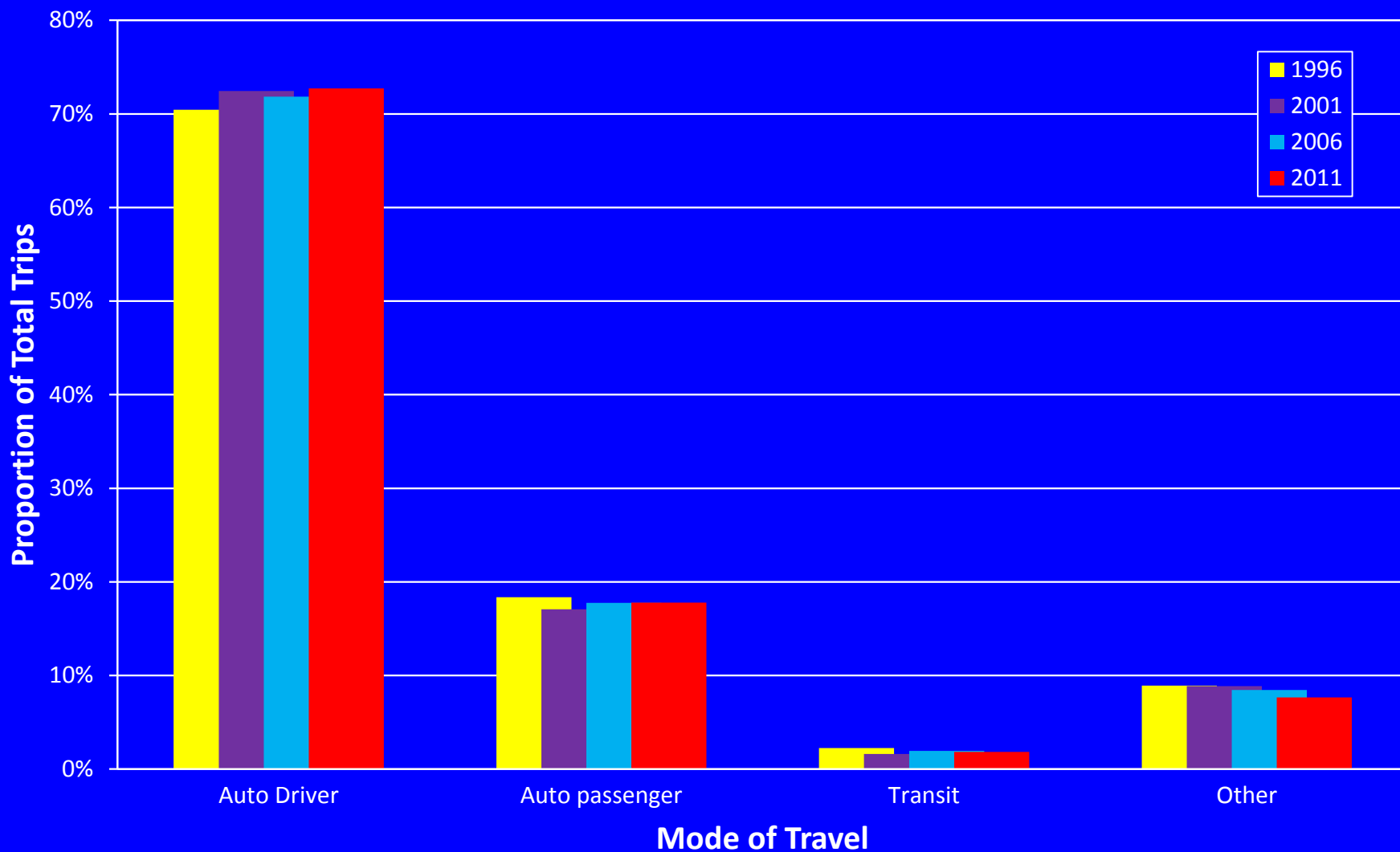
# Trip Start Time

## Non-GTHA Residents



# All Trips by Mode

## Non-GTHA Residents



# Data Access

Email: [info@dmg.utoronto.ca](mailto:info@dmg.utoronto.ca)